SAN JOAQUIN VALLEY
AIR POLLUTION CONTROL DISTRICT

San Joaquin Refining Company

FINAL ENGINEERING EVALUATION
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TITLE V APPLICATION REVIEW

Project #: 961034
Deemed Complete: May 8, 1997

Engineer: Juscelino Siongco
Date: February 6, 2002

Facility Number: S-36
Facility Name: San Joaquin Refining Company
Mailing Address: P O Box 5576
Bakersfield, CA 93388

Contact Name: Joe Selgrath
Phone: (661) 635-0465

Responsible Official: Ed Starbuck
Title: Vice President - Operations

I. PROPOSAL

San Joaquin Refining Company is proposing that an initial Title V permit be issued for its petroleum refining facility in Bakersfield, CA. The purpose of this evaluation is to identify all applicable requirements, determine if the facility will comply with those applicable requirements, and to provide the legal and factual basis for proposed permit conditions.

II. FACILITY LOCATION

San Joaquin Refining Company is located at Standard and Shell St, Bakersfield, CA 93308.

III. EQUIPMENT LISTING

A detailed facility printout listing all permitted equipment at the facility is shown in Attachment A.

A summary of the exempt equipment categories which describe the insignificant activities or equipment at the facility not requiring a permit is shown in Attachment B. This equipment is not exempt from facility-wide requirements.

IV. GENERAL PERMIT TEMPLATE USAGE

The applicant is requesting to use the following model general permit Templates:

A. SJV-UM-0-1, Facility Wide Umbrella

The applicant has requested to utilize template No. SJV-UM-0-1, Facility Wide Umbrella for this facility. Based on the information submitted in the Template Qualification Form, the applicant qualifies for the use of this template.

V. SCOPE OF EPA AND PUBLIC REVIEW

Certain segments of the proposed Operating Permit are based on model general permit templates that have been previously subject to EPA and public review. The terms and conditions from the model general permit templates are included in the proposed permit and are not subject to further EPA and public review.

For permit applications utilizing model general permit templates, public and agency comments on the District's proposed actions are limited to the applicant's eligibility for model general permit template, applicable requirements not covered by the model general permit template, and the applicable procedural requirements for issuance of Title V Operating Permits.

The following permit conditions, including their underlying applicable requirements, originate from model general permit templates and are not subject to further EPA and Public review:

Conditions 1-39 of the Facility Wide Requirements S-36-0-1

VI. APPLICABLE REQUIREMENTS ADDRESSED BY GENERAL PERMIT TEMPLATES

District Rule 1100, Equipment Breakdown (Amended December 17, 1992) (Non SIP replacement for Kern County Rule 111)

District Rule 1160, Emission Statements (Adopted November 18, 1992)

District Rule 2010, Permits Required (Amended December 17, 1992)

District Rule 2020, Exemptions (Amended July 21, 1994) (Non SIP replacement for Kern County Rule 202)

District Rule 2031, Transfer of Permits (Amended December 17, 1992)

District Rule 2040, Applications (Amended December 17, 1992)

District Rule 2070, Standards for Granting Applications (Amended December 17, 1992)

District Rule 2080, Conditional Approval (Amended December 17, 1992)

District Rule 2520, Federally Mandated Operating Permits - except section 9.4.2 (Adopted June 15, 1995)

District Rule 4101, Visible Emissions (Amended December 17, 1992) (Non SIP replacement for Kern County Rule 401)

District Rule 4601, Architectural Coatings (Amended December 17, 1992)

District Rule 8020, Fugitive Dust Requirements for Control of Fine Particulate Matter (PM-10) from Construction, Demolition, Excavation, and Extraction Activities (Amended April 25, 1996)

District Rule 8030, Fugitive Dust Requirements for Control of Fine Particulate Matter (PM-10) from Handling and Storage of Bulk Materials (Amended April 25, 1996)

District Rule 8060, Fugitive Dust Requirements for Control of Fine Particulate Matter (PM-10) from Paved and Unpaved Roads (Amended April 25, 1996)

40 CFR Part 61 Subpart M, National Emission Standard for Asbestos

40 CFR Part 82 Subpart F, Stratospheric Ozone

VII. APPLICABLE REQUIREMENTS NOT ADDRESSED BY GENERAL PERMIT TEMPLATES

District New and Modified Stationary Source Review Rule

District Rule 1070, Inspections (amended December 17, 1992)

District Rule 1081, Source Sampling (Amended December 16, 1993) (Non SIP replacement for Kern County Rule 108.1)

District Rule 2010, Permits Required (Amended December 17, 1992)

District Rule 2520, Sections 9.4.2 and 9.5.2, Federally Mandated Operating Permits (Adopted June 15, 1995)

District Rule 4001, New Source Performance Standards (Amended April 14, 1999)

District Rule 4201, Particulate Matter Concentration (Amended December 17, 1992)

District Rule 4301, Fuel Burning Equipment (Amended December 17, 1992)

District Rule 4451, Valves, Pressure Relief Valves, Flanges, Threaded Connections and Process Drains at Petroleum Refineries and Chemical Plants (Amended December 17, 1992)

District Rule 4452, Pump and Compressor Seals at Petroleum Refineries and Chemical Plants (Amended December 17, 1992)

District Rule 4453, Refinery Vacuum Producing Devices or Systems (Amended December 17, 1992)

District Rule 4454, Refinery Process Unit Turnaround (Amended December 17, 1992)

District Rule 4623, Storage of Organic Liquids (Amended December 17, 1992)

District Rule 4624, Organic Liquid Loading (Amended December 17, 1992)

District Rule 4625, Wastewater Separators (Amended December 17, 1992)

District Rule 4641, Cutback, Slow Cure, and Emulsified Asphalt, Paving and Maintenance (Amended December 17, 1992)

District Rule 4801, Sulfur Compounds (Amended December 17, 1992) (Non SIP replacement for Kern County Rule 407)

40 CFR Part 60, Subpart A, General Control Device Requirements

40 CFR Part 60, Subpart J, Standards of Performance for Petroleum Refineries

40 CFR Part 60, Subparts K, Ka, Kb, Standards of Performance for Storage Vessels for Petroleum Liquids

40 CFR Part 60, Subpart GGG, Standards of Performance for Equipment Leaks of VOC in Petroleum Refineries

40 CFR Part 60, Subpart QQQ, Standards of Performance for VOC Emissions from Petroleum Refinery Wastewater Systems

40 CFR Part 60, Subpart UU, Standards of Performance for Asphalt Processing and Asphalt Roofing Manufacture

40 CFR Part 60, Subpart VV, Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry

40 CFR Part 68, Chemical Accident Prevention Provisions

Petroleum Refinery MACT Standard

VIII. REQUIREMENTS NOT FEDERALLY ENFORCEABLE

For each Title V source, the District issues a single permit that contains the Federally Enforceable requirements, as well as the District-only requirements. The District-only requirements are not a part of the Title V Operating Permits. The terms and conditions that are part of the facility's Title V permit are designated as Federally Enforceable Through Title V Permit.

This facility is subject to the following rules that are not currently federally enforceable:

District Rule 4102 - Nuisance (Amended December 17, 1992)

- For this facility, condition 40 of the requirements for permit unit S-36-0-1, and condition 4 of the requirements for permit unit S-36-6-3.

- For this facility, condition 18 of the requirements for permit unit S-36-2-3 is based on this rule and is not Federally Enforceable through Title V.

District Rule 4305 - Boilers, Steam Generators, and Process Heaters (Amended December 19, 1996)

- For this facility, condition 14 of the requirements for permit unit S-36-99-1 is based on this rule and is not Federally Enforceable through Title V.

IX. COMPLIANCE

A. Requirements Addressed by Model General Permit Templates

1. Facility Wide Requirements

The applicant is proposing to use a general permit template to address federally applicable facility-wide requirements. Section IV of template SJV-UM-0-1 includes a demonstration of compliance for all applicable requirements. Template conditions have been added to the facility wide requirements S-36-0-1 as condition numbers 1 through 39 to assure compliance with these requirements.

B. Requirements Not Addressed by Model General Permit Templates

1. New and Modified Stationary Source Review Rule

a. Facility Wide Requirements (S-36-0-1)

This unit was subject to the District NSR Rule at the time the applicant applied for Authority to Construct (ATC). In accordance with the White Paper for streamlined Development of Part 70 Permit Applications, dated July 10, 1995, conditions from the resulting PTO were addressed to define how NSR permit terms should be incorporated into the Title V permit.

- Condition 1 of the PTO has been included as condition 40 of the requirements for this permit unit.

b. Atmospheric/Vacuum Crude Unit #4 (S-36-1-4)

This unit was subject to the District NSR Rule at the time the applicant applied for Authority to Construct (ATC). In accordance with the White Paper for streamlined Development of Part 70 Permit Applications, dated July 10, 1995, conditions from the resulting PTO were addressed to define how NSR permit terms should be incorporated into the Title V permit.

- Conditions 1 through 5 of the PTO have been included as conditions 15 through 19 of the requirements for this permit unit.

- Condition 6 of the PTO has been subsumed by condition 63 and 68 of the facility wide requirements.
- Condition 7 of the PTO has been subsumed by conditions 52 and 56 of the facility wide requirements.
- Conditions 8 through 23 of the PTO have been included as conditions 20 through 35 of the requirements for this permit unit.
- Conditions 24 and 25 of the PTO have been included as conditions 36 and 37 of the requirements for this permit unit. Record retention requirement has been increased from two to five years to comply with District Rule 2520, 9.5.2.

c. Atmospheric Crude Unit #1 (S-36-2-3)

This unit was subject to the District NSR Rule at the time the applicant applied for Authority to Construct (ATC). In accordance with the White Paper for streamlined Development of Part 70 Permit Applications, dated July 10, 1995, conditions from the resulting PTO were addressed to define how NSR permit terms should be incorporated into the Title V permit.

- Conditions 1 through 16 of the PTO have been included as conditions 14 through 29 of the requirements for this permit unit.
- Condition 17 of the PTO has been included as condition 30 of the requirements for this permit unit. Record retention requirement has been increased from two to five years to comply with District Rule 2520, 9.5.2.
- Condition 18 of the PTO has been included as condition 31 of the requirements for this permit unit.

d. Atmospheric Crude Unit #1 Flash Tower (S-36-3-3)

This unit was subject to the District NSR Rule at the time the applicant applied for Authority to Construct (ATC). In accordance with the White Paper for streamlined Development of Part 70 Permit Applications, dated July 10, 1995, conditions from the resulting PTO were addressed to define how NSR permit terms should be incorporated into the Title V permit.

- Condition 1 of the PTO has been included as condition 1 of the requirements for this permit unit.
- Condition 2 of the PTO has been subsumed by conditions 63 and 68 of the facility wide requirements.
- Condition 3 of the PTO has been subsumed by conditions 52 and 56 of the facility wide requirements.
- Condition 4 of the PTO has been included as condition 2 of the requirements for this permit unit.

e. ABA Plant with Asphalt Blowing Still (S-36-4-6)

This unit was subject to the District NSR Rule at the time the applicant applied for Authority to Construct (ATC). In accordance with the White Paper for streamlined Development of Part 70 Permit Applications, dated July 10, 1995, conditions from the resulting PTO were addressed to define how NSR permit terms should be incorporated into the Title V permit.

- Conditions 1 through 10 of the PTO have been included as conditions 15 through 24 of the requirements for this permit unit.
- Condition 11 of the PTO has been subsumed by conditions 63 and 68 of the facility wide requirements.
- Condition 12 of the PTO has been subsumed by conditions 52 and 56 of the facility wide requirements.
- Conditions 13 through 23 of the PTO have been included as conditions 25 through 35 of the requirements for this permit unit.
- Condition 24 of the PTO has been included as condition 36 of the requirements for this permit unit. Record retention requirement has been increased from two to five years to comply with District Rule 2520, 9.5.2.
- Condition 25 of the PTO has been included as condition 37 of the requirements for this permit unit.
- Conditions 26 and 27 of the PTO have been included as conditions 38 and 39 of the requirements for this permit unit. Record retention requirement has been increased from two to five years to comply with District Rule 2520, 9.5.2.

f. ABA Plant with Asphalt Blowing Still (S-36-5-3)

This unit was subject to the District NSR Rule at the time the applicant applied for Authority to Construct (ATC). In accordance with the White Paper for streamlined Development of Part 70 Permit Applications, dated July 10, 1995, conditions from the resulting PTO were addressed to define how NSR permit terms should be incorporated into the Title V permit.

- Condition 1 of the PTO has been included as condition 1 of the requirements for this permit unit.
- Condition 2 of the PTO has been included as condition 22 of the facility wide requirements.
- Condition 3 of the PTO has been included as condition 2 of the requirements for this permit unit.
- Condition 4 of the PTO has been included as condition 3 of the requirements for this permit unit.
- Condition 5 of the PTO has been subsumed by conditions 63 and 68 of the facility wide requirements.
- Condition 6 of the PTO has been subsumed by conditions 52 and 56 of the facility wide requirements.
- Condition 7 of the PTO has been included as condition 4 of the requirements for this permit unit.

g. 2,000 BBL Tank #2001 Oil/Water Separator (S-36-6-3)

This unit was subject to the District NSR Rule at the time the applicant applied for Authority to Construct (ATC). In accordance with the White Paper for streamlined Development of Part 70 Permit Applications, dated July 10, 1995, conditions from the resulting PTO were addressed to define how NSR permit terms should be incorporated into the Title V permit.

- Condition 1 of the PTO has been included as condition 1 of the requirements for this permit unit.
- Condition 2 of the PTO has been included as condition 2 of the requirements for this permit unit.
- Condition 3 of the PTO has been included as condition 3 of the requirements for this permit unit.
- Condition 4 of the PTO has been included as condition 4 of the requirements for this permit unit.
- Condition 5 of the PTO has been included as condition 5 of the requirements for this permit unit.

h. 280,000 Gallon Petroleum Storage Tank (S-36-8-1)

This unit was subject to the District NSR Rule at the time the applicant applied for Authority to Construct (ATC). In accordance with the White Paper for streamlined Development of Part 70 Permit Applications, dated July 10, 1995, conditions from the resulting PTO were addressed to define how NSR permit terms should be incorporated into the Title V permit.

- Condition 1 of the PTO has been included as condition 40 of the facility wide requirements.

i. 400,000 Gallon Petroleum Storage Tank (S-36-9-1)

This unit was subject to the District NSR Rule at the time the applicant applied for Authority to Construct (ATC). In accordance with the White Paper for streamlined Development of Part 70 Permit Applications, dated July 10, 1995, conditions from the resulting PTO were addressed to define how NSR permit terms should be incorporated into the Title V permit.

- Condition 1 of the PTO has been included as condition 40 of the facility wide requirements.

j. 400,000 Gallon Petroleum Storage Tank (S-36-10-1)

This unit was subject to the District NSR Rule at the time the applicant applied for Authority to Construct (ATC). In accordance with the White Paper for streamlined Development of Part 70 Permit Applications, dated July 10, 1995, conditions from the resulting PTO were addressed to define how NSR permit terms should be incorporated into the Title V permit.

- Condition 1 of the PTO has been included as condition 40 of the facility wide requirements.

k. 800,000 Gallon Petroleum Storage Tank (S-36-11-1)

This unit was subject to the District NSR Rule at the time the applicant applied for Authority to Construct (ATC). In

accordance with the White Paper for streamlined Development of Part 70 Permit Applications, dated July 10, 1995, conditions from the resulting PTO were addressed to define how NSR permit terms should be incorporated into the Title V permit.

- Condition 1 of the PTO has been included as condition 40 of the facility wide requirements.

l. 800,000 Gallon Petroleum Storage Tank (S-36-12-1)

This unit was subject to the District NSR Rule at the time the applicant applied for Authority to Construct (ATC). In accordance with the White Paper for streamlined Development of Part 70 Permit Applications, dated July 10, 1995, conditions from the resulting PTO were addressed to define how NSR permit terms should be incorporated into the Title V permit.

- Condition 1 of the PTO has been included as condition 40 of the facility wide requirements.

m. 800,000 Gallon Petroleum Storage Tank (S-36-13-1)

This unit was subject to the District NSR Rule at the time the applicant applied for Authority to Construct (ATC). In accordance with the White Paper for streamlined Development of Part 70 Permit Applications, dated July 10, 1995, conditions from the resulting PTO were addressed to define how NSR permit terms should be incorporated into the Title V permit.

- Condition 1 of the PTO has been included as condition 40 of the facility wide requirements.

n. 800,000 Gallon Petroleum Storage Tank (S-36-14-1)

This unit was subject to the District NSR Rule at the time the applicant applied for Authority to Construct (ATC). In accordance with the White Paper for streamlined Development of Part 70 Permit Applications, dated July 10, 1995, conditions from the resulting PTO were addressed to define how NSR permit terms should be incorporated into the Title V permit.

- Condition 1 of the PTO has been included as condition 40 of the facility wide requirements.

o. 1,280,000 Gallon Petroleum Storage Tank (S-36-15-1)

This unit was subject to the District NSR Rule at the time the applicant applied for Authority to Construct (ATC). In accordance with the White Paper for streamlined Development of Part 70 Permit Applications, dated July 10, 1995, conditions from the resulting PTO were addressed to define how NSR permit terms should be incorporated into the Title V permit.

- Condition 1 of the PTO has been included as condition 40 of the facility wide requirements.

p. 2,200,000 Gallon Petroleum Storage Tank (S-36-16-1)

This unit was subject to the District NSR Rule at the time the applicant applied for Authority to Construct (ATC). In accordance with the White Paper for streamlined Development of Part 70 Permit Applications, dated July 10, 1995, conditions from the resulting PTO were addressed to define how NSR permit terms should be incorporated into the Title V permit.

- Condition 1 of the PTO has been included as condition 40 of the facility wide requirements.

q. 3,200,000 Gallon Petroleum Storage Tank (S-36-17-1)

This unit was subject to the District NSR Rule at the time the applicant applied for Authority to Construct (ATC). In accordance with the White Paper for streamlined Development of Part 70 Permit Applications, dated July 10, 1995, conditions from the resulting PTO were addressed to define how NSR permit terms should be incorporated into the Title V permit.

- Condition 1 of the PTO has been included as condition 40 of the facility wide requirements.

r. 16,000 Gallon Petroleum Storage Tank (S-36-18-1)

This unit was subject to the District NSR Rule at the time the applicant applied for Authority to Construct (ATC). In accordance with the White Paper for streamlined Development of Part 70 Permit Applications, dated July 10, 1995, conditions from the resulting PTO were addressed to define how NSR permit terms should be incorporated into the Title V permit.

- Condition 1 of the PTO has been included as condition 5 of the requirements for this permit unit.
- Condition 2 of the PTO has been included as condition 6 of the requirements for this permit unit.

s. 16,000 Gallon Petroleum Storage Tank (S-36-19-1)

This unit was subject to the District NSR Rule at the time the applicant applied for Authority to Construct (ATC). In accordance with the White Paper for streamlined Development of Part 70 Permit Applications, dated July 10, 1995, conditions from the resulting PTO were addressed to define how NSR permit terms should be incorporated into the Title V permit.

- Condition 1 of the PTO has been included as condition 5 of the requirements for this permit unit.
- Condition 2 of the PTO has been included as condition 6 of the requirements for this permit unit.

t. 16,000 Gallon Petroleum Storage Tank (S-36-20-1)

This unit was subject to the District NSR Rule at the time the applicant applied for Authority to Construct (ATC). In accordance with the White Paper for streamlined Development of Part 70 Permit Applications, dated July 10, 1995, conditions from the resulting PTO were addressed to define how NSR permit terms should be incorporated into the Title V permit.

- Condition 1 of the PTO has been included as condition 5 of the requirements for this permit unit.
- Condition 2 of the PTO has been included as condition 6 of the requirements for this permit unit.

u. 20,000 Gallon Petroleum Storage Tank (S-36-21-1)

This unit was subject to the District NSR Rule at the time the applicant applied for Authority to Construct (ATC). In accordance with the White Paper for streamlined Development of Part 70 Permit Applications, dated July 10, 1995, conditions from the resulting PTO were addressed to define how NSR permit terms should be incorporated into the Title V permit.

- Condition 1 of the PTO has been included as condition 5 of the requirements for this permit unit.
- Condition 2 of the PTO has been included as condition 6 of the requirements for this permit unit.

v. 20,000 Gallon Petroleum Storage Tank (S-36-22-1)

This unit was subject to the District NSR Rule at the time the applicant applied for Authority to Construct (ATC). In accordance with the White Paper for streamlined Development of Part 70 Permit Applications, dated July 10, 1995, conditions from the resulting PTO were addressed to define how NSR permit terms should be incorporated into the Title V permit.

- Condition 1 of the PTO has been included as condition 5 of the requirements for this permit unit.
- Condition 2 of the PTO has been included as condition 6 of the requirements for this permit unit.

w. 20,000 Gallon Petroleum Storage Tank (S-36-23-1)

This unit was subject to the District NSR Rule at the time the applicant applied for Authority to Construct (ATC). In accordance with the White Paper for streamlined Development of Part 70 Permit Applications, dated July 10, 1995, conditions from the resulting PTO were addressed to define how NSR permit terms should be incorporated into the Title V permit.

- Condition 1 of the PTO has been included as condition 5 of the requirements for this permit unit.

- Condition 2 of the PTO has been included as condition 6 of the requirements for this permit unit.

x. 20,000 Gallon Petroleum Storage Tank (S-36-24-1)

This unit was subject to the District NSR Rule at the time the applicant applied for Authority to Construct (ATC). In accordance with the White Paper for streamlined Development of Part 70 Permit Applications, dated July 10, 1995, conditions from the resulting PTO were addressed to define how NSR permit terms should be incorporated into the Title V permit.

- Condition 1 of the PTO has been included as condition 5 of the requirements for this permit unit.
- Condition 2 of the PTO has been included as condition 6 of the requirements for this permit unit.

y. 24,000 Gallon Petroleum Storage Tank (S-36-25-1)

This unit was subject to the District NSR Rule at the time the applicant applied for Authority to Construct (ATC). In accordance with the White Paper for streamlined Development of Part 70 Permit Applications, dated July 10, 1995, conditions from the resulting PTO were addressed to define how NSR permit terms should be incorporated into the Title V permit.

- Condition 1 of the PTO has been included as condition 5 of the requirements for this permit unit.
- Condition 2 of the PTO has been included as condition 6 of the requirements for this permit unit.

z. 40,000 Gallon Petroleum Storage Tank (S-36-26-1)

This unit was subject to the District NSR Rule at the time the applicant applied for Authority to Construct (ATC). In accordance with the White Paper for streamlined Development of Part 70 Permit Applications, dated July 10, 1995, conditions from the resulting PTO were addressed to define how NSR permit terms should be incorporated into the Title V permit.

- Condition 1 of the PTO has been included as condition 40 of the facility wide requirements.

aa. 40,000 Gallon Petroleum Storage Tank (S-36-27-1)

This unit was subject to the District NSR Rule at the time the applicant applied for Authority to Construct (ATC). In accordance with the White Paper for streamlined Development of Part 70 Permit Applications, dated July 10, 1995, conditions from the resulting PTO were addressed to define how NSR permit terms should be incorporated into the Title V permit.

- Condition 1 of the PTO has been included as condition 40 of the facility wide requirements.

bb. 40,000 Gallon Petroleum Storage Tank (S-36-28-1)

This unit was subject to the District NSR Rule at the time the applicant applied for Authority to Construct (ATC). In accordance with the White Paper for streamlined Development of Part 70 Permit Applications, dated July 10, 1995, conditions from the resulting PTO were addressed to define how NSR permit terms should be incorporated into the Title V permit.

- Condition 1 of the PTO has been included as condition 40 of the facility wide requirements.

cc. 40,000 Gallon Petroleum Storage Tank (S-36-29-1)

This unit was subject to the District NSR Rule at the time the applicant applied for Authority to Construct (ATC). In accordance with the White Paper for streamlined Development of Part 70 Permit Applications, dated July 10, 1995, conditions from the resulting PTO were addressed to define how NSR permit terms should be incorporated into the Title V permit.

- Condition 1 of the PTO has been included as condition 5 of the requirements for this permit unit.
- Condition 2 of the PTO has been included as condition 6 of the requirements for this permit unit.

dd. 40,000 Gallon Petroleum Storage Tank (S-36-30-1)

This unit was subject to the District NSR Rule at the time the applicant applied for Authority to Construct (ATC). In accordance with the White Paper for streamlined Development of Part 70 Permit Applications, dated July 10, 1995, conditions from the resulting PTO were addressed to define how NSR permit terms should be incorporated into the Title V permit.

- Condition 1 of the PTO has been included as condition 5 of the requirements for this permit unit.
- Condition 2 of the PTO has been included as condition 6 of the requirements for this permit unit.

ee. 52,000 Gallon Petroleum Storage Tank (S-36-31-1)

This unit was subject to the District NSR Rule at the time the applicant applied for Authority to Construct (ATC). In accordance with the White Paper for streamlined Development of Part 70 Permit Applications, dated July 10, 1995, conditions from the resulting PTO were addressed to define how NSR permit terms should be incorporated into the Title V permit.

- Condition 1 of the PTO has been included as condition 5 of the requirements for this permit unit.
- Condition 2 of the PTO has been included as condition 6 of the requirements for this permit unit.

ff. 83,000 Gallon Petroleum Storage Tank (S-36-34-1)

This unit was subject to the District NSR Rule at the time the applicant applied for Authority to Construct (ATC). In accordance with the White Paper for streamlined Development of Part 70 Permit Applications, dated July 10, 1995, conditions from the resulting PTO were addressed to define how NSR permit terms should be incorporated into the Title V permit.

- Condition 1 of the PTO has been included as condition 5 of the requirements for this permit unit.

- Condition 2 of the PTO has been included as condition 6 of the requirements for this permit unit.

gg. 100,000 Gallon Petroleum Storage Tank (S-36-35-1)

This unit was subject to the District NSR Rule at the time the applicant applied for Authority to Construct (ATC). In accordance with the White Paper for streamlined Development of Part 70 Permit Applications, dated July 10, 1995, conditions from the resulting PTO were addressed to define how NSR permit terms should be incorporated into the Title V permit.

- Condition 1 of the PTO has been included as condition 5 of the requirements for this permit unit.
- Condition 2 of the PTO has been included as condition 6 of the requirements for this permit unit.

hh. Lube Oil Finishing Plant (S-36-37-10)

This unit was subject to the District NSR Rule at the time the applicant applied for Authority to Construct (ATC). In accordance with the White Paper for streamlined Development of Part 70 Permit Applications, dated July 10, 1995, conditions from the resulting PTO were addressed to define how NSR permit terms should be incorporated into the Title V permit.

- Conditions 1 through 17 of the PTO have been included as conditions 8 through 24 of the requirements for this permit unit.
- Condition 18 of the PTO has been subsumed by conditions 63 and 68 of the facility wide requirements.
- Condition 19 of the PTO has been subsumed by conditions 52 and 56 of the facility wide requirements.
- Conditions 20 through 30 of the PTO have been included as conditions 25 through 35 of the requirements for this permit unit.
- Condition 31 of the PTO has been included as condition 36 of the requirements for this permit unit. Record retention requirement has been increased from two to five years to comply with District Rule 2520, 9.5.2.

- Conditions 32 and 33 of the PTO have been included as conditions 37 and 38 of the requirements for this permit unit.
- Conditions 34 and 35 of the PTO have been included as conditions 39 and 40 of the requirements for this permit unit. Record retention requirement has been increased from two to five years to comply with District Rule 2520, 9.5.2.

ii. 29,400 Gallon Solvent Storage Tank (S-36-38-2)

This unit was subject to the District NSR Rule at the time the applicant applied for Authority to Construct (ATC). In accordance with the White Paper for streamlined Development of Part 70 Permit Applications, dated July 10, 1995, conditions from the resulting PTO were addressed to define how NSR permit terms should be incorporated into the Title V permit.

- Condition 1 of the PTO has been included as condition 9 of the requirements for this permit unit.
- Condition 2 of the PTO has been included as condition 10 of the requirements for this permit unit.
- Condition 3 of the PTO has been included as condition 11 of the requirements for this permit unit.

jj. 840,000 Gallon Petroleum Storage Tank (S-36-39-1)

This unit was subject to the District NSR Rule at the time the applicant applied for Authority to Construct (ATC). In accordance with the White Paper for streamlined Development of Part 70 Permit Applications, dated July 10, 1995, conditions from the resulting PTO were addressed to define how NSR permit terms should be incorporated into the Title V permit.

- Condition 1 of the PTO has been included as condition 40 of the facility wide requirements.

kk. 840,000 Gallon Petroleum Storage Tank (S-36-40-1)

This unit was subject to the District NSR Rule at the time the applicant applied for Authority to Construct (ATC). In

accordance with the White Paper for streamlined Development of Part 70 Permit Applications, dated July 10, 1995, conditions from the resulting PTO were addressed to define how NSR permit terms should be incorporated into the Title V permit.

- Condition 1 of the PTO has been included as condition 40 of the facility wide requirements.

ll. 31.25 MMBtu/hr Boiler (S-36-41-6)

This unit was subject to the District NSR Rule at the time the applicant applied for Authority to Construct (ATC). In accordance with the White Paper for streamlined Development of Part 70 Permit Applications, dated July 10, 1995, conditions from the resulting PTO were addressed to define how NSR permit terms should be incorporated into the Title V permit.

- Conditions 1 through 18 of the PTO have been included as conditions 15 through 32 of the requirements for this permit unit.
- Condition 19 of the PTO has been included as condition 33 of the requirements for this permit unit. Record retention requirement has been increased from two to five years to comply with District Rule 2520, 9.5.2.
- Condition 20 of the PTO has been included as condition 34 of the requirements for this permit unit.
- Condition 21 of the PTO has been included as condition 35 of the requirements for this permit unit. Record retention requirement has been increased from two to five years to comply with District Rule 2520, 9.5.2.

mm. Crude Unit and/or Visbreaking Unit (S-36-42-3)

This unit was subject to the District NSR Rule at the time the applicant applied for Authority to Construct (ATC). In accordance with the White Paper for streamlined Development of Part 70 Permit Applications, dated July 10, 1995, conditions from the resulting PTO were addressed to define how NSR permit terms should be incorporated into the Title V permit.

- Conditions 1 through 11 of the PTO have been included as conditions 14 through 24 of the requirements for this permit unit.
- Condition 12 of the PTO has been subsumed by conditions 63 and 68 of the facility wide requirements.
- Condition 13 of the PTO has been included as conditions 52 and 56 of the facility wide requirements.
- Conditions 14 through 24 of the PTO have been included as conditions 25 through 35 of the requirements for this permit unit.
- Condition 25 of the PTO has been included as condition 36 of the requirements for this permit unit. Record retention requirement has been increased from two to five years to comply with District Rule 2520, 9.5.2.
- Condition 26 of the PTO has been included as condition 37 of the requirements for this permit unit.
- Conditions 27 and 28 of the PTO have been included as conditions 38 and 39 of the requirements for this permit unit. Record retention requirement has been increased from two to five years to comply with District Rule 2520, 9.5.2.

nn. ABA Plant with Asphalt Blowing Still (S-36-43-2)

This unit was subject to the District NSR Rule at the time the applicant applied for Authority to Construct (ATC). In accordance with the White Paper for streamlined Development of Part 70 Permit Applications, dated July 10, 1995, conditions from the resulting PTO were addressed to define how NSR permit terms should be incorporated into the Title V permit.

- Condition 1 of the PTO has been included as condition 22 of the facility wide requirements.
- Conditions 2 through 9 of the PTO have been included as conditions 1 through 8 of the requirements for this permit unit.
- Condition 10 of the PTO has been subsumed by conditions 63 and 68 of the facility wide requirements
- Condition 11 of the PTO has been included as conditions 52 and 56 of the facility wide requirements.
- Condition 12 of the PTO has been included as condition 9 of the requirements for this permit unit.

oo. 29,400 Gallon Solvent Storage Tank (S-36-44-1)

This unit was subject to the District NSR Rule at the time the applicant applied for Authority to Construct (ATC). In accordance with the White Paper for streamlined Development of Part 70 Permit Applications, dated July 10, 1995, conditions from the resulting PTO were addressed to define how NSR permit terms should be incorporated into the Title V permit.

- Conditions 1 through 3 of the PTO have been included as conditions 11 through 13 of the requirements for this permit unit.

pp. 22,428 Gallon Petroleum Storage Tank (S-36-47-1)

This unit was subject to the District NSR Rule at the time the applicant applied for Authority to Construct (ATC). In accordance with the White Paper for streamlined Development of Part 70 Permit Applications, dated July 10, 1995, conditions from the resulting PTO were addressed to define how NSR permit terms should be incorporated into the Title V permit.

- Condition 1 of the PTO has been included as condition 5 of the requirements for this permit unit.
- Condition 2 of the PTO has been included as condition 6 of the requirements for this permit unit.

qq. 44,226 Gallon Petroleum Storage Tank (S-36-48-1)

This unit was subject to the District NSR Rule at the time the applicant applied for Authority to Construct (ATC). In accordance with the White Paper for streamlined Development of Part 70 Permit Applications, dated July 10, 1995, conditions from the resulting PTO were addressed to define how NSR permit terms should be incorporated into the Title V permit.

- Condition 1 of the PTO has been included as condition 40 of the facility wide requirements.

rr. 44,142 Gallon Petroleum Storage Tank (S-36-49-1)

This unit was subject to the District NSR Rule at the time the applicant applied for Authority to Construct (ATC). In accordance with the White Paper for streamlined Development of Part 70 Permit Applications, dated July 10, 1995, conditions from the resulting PTO were addressed to define how NSR permit terms should be incorporated into the Title V permit.

- Condition 1 of the PTO has been included as condition 40 of the facility wide requirements.

ss. 576,702 Gallon Petroleum Storage Tank (S-36-50-1)

This unit was subject to the District NSR Rule at the time the applicant applied for Authority to Construct (ATC). In accordance with the White Paper for streamlined Development of Part 70 Permit Applications, dated July 10, 1995, conditions from the resulting PTO were addressed to define how NSR permit terms should be incorporated into the Title V permit.

- Condition 1 of the PTO has been included as condition 40 of the facility wide requirements.

tt. 103.4 MMBtu/hr Diesel Treating Unit (S-36-51-5)

This unit was subject to the District NSR Rule at the time the applicant applied for Authority to Construct (ATC). In accordance with the White Paper for streamlined Development of Part 70 Permit Applications, dated July 10, 1995, conditions from the resulting PTO were addressed to define how NSR permit terms should be incorporated into the Title V permit.

- Conditions 1 through 62 of the PTO have been included as conditions 1 through 62 of the requirements for this permit unit.
- Condition 63 of the PTO has been included as condition 63 of the requirements for this permit unit. Record retention has been increased from two to five years to comply with District Rule 2520, 9.5.2.

uu. 84,000 Gallon Petroleum Storage Tank (S-36-58-1)

This unit was subject to the District NSR Rule at the time the applicant applied for Authority to Construct (ATC). In accordance with the White Paper for streamlined Development of Part 70 Permit Applications, dated July 10, 1995, conditions from the resulting PTO were addressed to define how NSR permit terms should be incorporated into the Title V permit.

- Condition 1 of the PTO has been included as condition 40 of the facility wide requirements.

vv. 128,000 Gallon Petroleum Storage Tank (S-36-59-1)

This unit was subject to the District NSR Rule at the time the applicant applied for Authority to Construct (ATC). In accordance with the White Paper for streamlined Development of Part 70 Permit Applications, dated July 10, 1995, conditions from the resulting PTO were addressed to define how NSR permit terms should be incorporated into the Title V permit.

- Condition 1 of the PTO has been included as condition 40 of the facility wide requirements.

ww. 126,000 Gallon Petroleum Storage Tank (S-36-60-1)

This unit was subject to the District NSR Rule at the time the applicant applied for Authority to Construct (ATC). In accordance with the White Paper for streamlined Development of Part 70 Permit Applications, dated July 10, 1995, conditions from the resulting PTO were addressed to define how NSR permit terms should be incorporated into the Title V permit.

- Condition 1 of the PTO has been included as condition 40 of the facility wide requirements.

xx. 126,000 Gallon Petroleum Storage Tank (S-36-61-1)

This unit was subject to the District NSR Rule at the time the applicant applied for Authority to Construct (ATC). In accordance with the White Paper for streamlined Development of Part 70 Permit Applications, dated July 10,

1995, conditions from the resulting PTO were addressed to define how NSR permit terms should be incorporated into the Title V permit.

- Condition 1 of the PTO has been included as condition 40 of the facility wide requirements.

yy. 126,000 Gallon Petroleum Storage Tank (S-36-62-1)

This unit was subject to the District NSR Rule at the time the applicant applied for Authority to Construct (ATC). In accordance with the White Paper for streamlined Development of Part 70 Permit Applications, dated July 10, 1995, conditions from the resulting PTO were addressed to define how NSR permit terms should be incorporated into the Title V permit.

- Condition 1 of the PTO has been included as condition 40 of the facility wide requirements.

zz. 126,000 Gallon Petroleum Storage Tank (S-36-63-1)

This unit was subject to the District NSR Rule at the time the applicant applied for Authority to Construct (ATC). In accordance with the White Paper for streamlined Development of Part 70 Permit Applications, dated July 10, 1995, conditions from the resulting PTO were addressed to define how NSR permit terms should be incorporated into the Title V permit.

- Condition 1 of the PTO has been included as condition 40 of the facility wide requirements.

aaa. 126,000 Gallon Petroleum Storage Tank (S-36-64-1)

This unit was subject to the District NSR Rule at the time the applicant applied for Authority to Construct (ATC). In accordance with the White Paper for streamlined Development of Part 70 Permit Applications, dated July 10, 1995, conditions from the resulting PTO were addressed to define how NSR permit terms should be incorporated into the Title V permit.

- Condition 1 of the PTO has been included as condition 40 of the facility wide requirements.

bbb. 210,000 Gallon Petroleum Storage Tank (S-36-65-1)

This unit was subject to the District NSR Rule at the time the applicant applied for Authority to Construct (ATC). In accordance with the White Paper for streamlined Development of Part 70 Permit Applications, dated July 10, 1995, conditions from the resulting PTO were addressed to define how NSR permit terms should be incorporated into the Title V permit.

- Condition 1 of the PTO has been included as condition 40 of the facility wide requirements.

ccc. 210,000 Gallon Petroleum Storage Tank (S-36-66-1)

This unit was subject to the District NSR Rule at the time the applicant applied for Authority to Construct (ATC). In accordance with the White Paper for streamlined Development of Part 70 Permit Applications, dated July 10, 1995, conditions from the resulting PTO were addressed to define how NSR permit terms should be incorporated into the Title V permit.

- Condition 1 of the PTO has been included as condition 40 of the facility wide requirements.

ddd. 210,000 Gallon Petroleum Storage Tank (S-36-67-1)

This unit was subject to the District NSR Rule at the time the applicant applied for Authority to Construct (ATC). In accordance with the White Paper for streamlined Development of Part 70 Permit Applications, dated July 10, 1995, conditions from the resulting PTO were addressed to define how NSR permit terms should be incorporated into the Title V permit.

- Condition 1 of the PTO has been included as condition 40 of the facility wide requirements.

eee. 210,000 Gallon Petroleum Storage Tank (S-36-68-1)

This unit was subject to the District NSR Rule at the time the applicant applied for Authority to Construct (ATC). In accordance with the White Paper for streamlined Development of Part 70 Permit Applications, dated July 10, 1995, conditions from the resulting PTO were addressed to define how NSR permit terms should be incorporated into the Title V permit.

- Condition 1 of the PTO has been included as condition 40 of the facility wide requirements.

fff. 420,000 Gallon Petroleum Storage Tank (S-36-69-1)

This unit was subject to the District NSR Rule at the time the applicant applied for Authority to Construct (ATC). In accordance with the White Paper for streamlined Development of Part 70 Permit Applications, dated July 10, 1995, conditions from the resulting PTO were addressed to define how NSR permit terms should be incorporated into the Title V permit.

- Condition 1 of the PTO has been included as condition 40 of the facility wide requirements.

ggg. 420,000 Gallon Petroleum Storage Tank (S-36-70-1)

This unit was subject to the District NSR Rule at the time the applicant applied for Authority to Construct (ATC). In accordance with the White Paper for streamlined Development of Part 70 Permit Applications, dated July 10, 1995, conditions from the resulting PTO were addressed to define how NSR permit terms should be incorporated into the Title V permit.

- Condition 1 of the PTO has been included as condition 40 of the facility wide requirements.

hhh. 840,000 Gallon Petroleum Storage Tank (S-36-71-1)

This unit was subject to the District NSR Rule at the time the applicant applied for Authority to Construct (ATC). In accordance with the White Paper for streamlined Development of Part 70 Permit Applications, dated July 10, 1995, conditions from the resulting PTO were addressed to

define how NSR permit terms should be incorporated into the Title V permit.

- Condition 1 of the PTO has been included as condition 40 of the facility wide requirements.

iii. 840,000 Gallon Petroleum Storage Tank (S-36-72-1)

This unit was subject to the District NSR Rule at the time the applicant applied for Authority to Construct (ATC). In accordance with the White Paper for streamlined Development of Part 70 Permit Applications, dated July 10, 1995, conditions from the resulting PTO were addressed to define how NSR permit terms should be incorporated into the Title V permit.

- Condition 1 of the PTO has been included as condition 40 of the facility wide requirements.

jjj. 19 MMBtu/hr Titusville Boiler (S-36-76-2)

This unit has been identified by permit condition 1 of the PTO, N-36-76-4, as being a dormant unit. This unit will not be evaluated at this time. Refer to section IX.B.5 for a summary of this unit.

kkk. Fuel Gas System (S-36-80-1)

This unit was subject to the District NSR Rule at the time the applicant applied for Authority to Construct (ATC). In accordance with the White Paper for streamlined Development of Part 70 Permit Applications, dated July 10, 1995, conditions from the resulting PTO were addressed to define how NSR permit terms should be incorporated into the Title V permit.

- Conditions 1 through 12 of the PTO have been included as conditions 1 through 12 of the requirements for this permit unit.
- Condition 13 of the PTO has been included as conditions 63 and 68 of the facility wide requirements.
- Condition 14 of the PTO has been included as conditions 52 and 56 of the facility wide requirements.

- Condition 15 of the PTO has been included as condition 13 of the requirements for this permit unit.

lll. 84,000 Gallon Naphtha Storage Tank (S-36-81-1)

This unit was subject to the District NSR Rule at the time the applicant applied for Authority to Construct (ATC). In accordance with the White Paper for streamlined Development of Part 70 Permit Applications, dated July 10, 1995, conditions from the resulting PTO were addressed to define how NSR permit terms should be incorporated into the Title V permit.

- Conditions 1 through 13 of the PTO have been included as conditions 1 through 13 of the requirements for this permit unit.

mmm. Naphtha Truck Loading Operation (S-36-82-1)

This unit was subject to the District NSR Rule at the time the applicant applied for Authority to Construct (ATC). In accordance with the White Paper for streamlined Development of Part 70 Permit Applications, dated July 10, 1995, conditions from the resulting PTO were addressed to define how NSR permit terms should be incorporated into the Title V permit.

- Conditions 1 through 5 of the PTO have been included as conditions 3 through 7 of the requirements for this permit unit.

nnn. 12.6 MMBtu/hr Oil/Gas Fired Standby Boiler (S-36-99-1)

This unit was subject to the District NSR Rule at the time the applicant applied for Authority to Construct (ATC). In accordance with the White Paper for streamlined Development of Part 70 Permit Applications, dated July 10, 1995, conditions from the resulting PTO were addressed to define how NSR permit terms should be incorporated into the Title V permit.

- Condition 1 of the PTO has been included as condition 22 of the facility wide requirements.

- Conditions 2 through 8 of the PTO have been included as conditions 13 through 19 of the requirements.
- Conditions 9 and 10 of the PTO have been included as conditions 20 and 21 of the requirements for this permit unit. Record retention requirement has been increased from two to five years to comply with District Rule 2520, 9.5.2.

ooo. Loading Racks #1, #2, #3 and #5 (S-36-100-1)

This unit was subject to the District NSR Rule at the time the applicant applied for Authority to Construct (ATC). In accordance with the White Paper for streamlined Development of Part 70 Permit Applications, dated July 10, 1995, conditions from the resulting PTO were addressed to define how NSR permit terms should be incorporated into the Title V permit.

- Condition 1 of the PTO has been subsumed by condition 1 of the requirements for this permit unit.

ppp. Loading Racks #6 and #7 (S-36-101-1)

This unit was subject to the District NSR Rule at the time the applicant applied for Authority to Construct (ATC). In accordance with the White Paper for streamlined Development of Part 70 Permit Applications, dated July 10, 1995, conditions from the resulting PTO were addressed to define how NSR permit terms should be incorporated into the Title V permit.

- Condition 1 of the PTO has been included as condition 40 of the facility wide requirements.
- Conditions 2 through 9 of the PTO have been included as conditions 1 through 8 of the requirements for this permit unit.
- Condition 10 of the PTO has been included as condition 9 of the requirements for this permit unit. Record retention requirement has been increased from two to five years to comply with District Rule 2520, 9.5.2.

qqq. Asphalt Truck Loading Rack #4 and Loading Arms #10 and #11 (S-36-102-1)

This unit was subject to the District NSR Rule at the time the applicant applied for Authority to Construct (ATC). In accordance with the White Paper for streamlined Development of Part 70 Permit Applications, dated July 10, 1995, conditions from the resulting PTO were addressed to define how NSR permit terms should be incorporated into the Title V permit.

- Condition 1 of the PTO has been subsumed by condition 1 of the requirements for this permit unit.

rrr. Railcar Loadout (S-36-103-1)

This unit was subject to the District NSR Rule at the time the applicant applied for Authority to Construct (ATC). In accordance with the White Paper for streamlined Development of Part 70 Permit Applications, dated July 10, 1995, conditions from the resulting PTO were addressed to define how NSR permit terms should be incorporated into the Title V permit.

- Condition 1 of the PTO has been subsumed by condition 1 of the requirements for this permit unit.

sss. 37,000 BBL Distillate Oil Tank (S-36-104-2)

This unit was subject to the District NSR Rule at the time the applicant applied for Authority to Construct (ATC). In accordance with the White Paper for streamlined Development of Part 70 Permit Applications, dated July 10, 1995, conditions from the resulting PTO were addressed to define how NSR permit terms should be incorporated into the Title V permit.

- Conditions 1 through 3 of the PTO have been included as conditions 1 through 3 of the requirements for this permit unit.
- Condition 4 of the PTO has been included as condition 4 of the requirements for this permit unit. Record retention has been increased from two to five years to comply with District Rule 2520, 9.5.2.

ttt. 187 BHP Caterpillar Emergency Diesel IC Engine (S-36-105-1)

This unit was subject to the District NSR Rule at the time the applicant applied for Authority to Construct (ATC). In accordance with the White Paper for streamlined Development of Part 70 Permit Applications, dated July 10, 1995, conditions from the resulting PTO were addressed to define how NSR permit terms should be incorporated into the Title V permit.

- Condition 1 of the PTO has been included as condition 22 of the facility wide requirements.
- Conditions 2 through 6 of the PTO have been included as conditions 2 through 6 of the requirements for this permit unit.

uuu. 4,200,000 Gallon Internal Floating Roof Oil Storage Tank (S-36-108-1)

This unit was subject to the District NSR Rule at the time the applicant applied for Authority to Construct (ATC). In accordance with the White Paper for streamlined Development of Part 70 Permit Applications, dated July 10, 1995, conditions from the resulting PTO were addressed to define how NSR permit terms should be incorporated into the Title V permit.

- Condition 1 of the PTO has been included as condition 40 of the facility wide requirements.
- Conditions 2 through 23 of the PTO have been included as conditions 1 through 22 of the requirements for this permit unit.
- Condition 24 of the PTO has been included as condition 23 of the requirements for this permit unit. Record retention has been increased from two to five years to comply with District Rule 2520, 9.5.2.
- Conditions 25 and 26 of the PTO have been included as conditions 24 and 25 of the requirements for this permit unit.

2. District Rule 1070, <u>Inspections</u> - (Non SIP replacement for Kern County Rule 107)

District Rule 1070 has been submitted to the EPA to replace Kern County APCD Rule 107. The requirements of these rules are compared below in Table 1, showing that the District Rule is at least as stringent as the County Rule.

Table 1 - Comparison of District Rule 1070 to Kern County Rule 107

REQUIREMENT	District Rule 1070	Kern County Rule 107
Inspections shall be made by the enforcement agency for the purpose of obtaining information necessary to determine whether air pollution sources are in compliance with applicable rules and regulations.	✓	✓
The District has authority to require record keeping, to make inspections and to conduct tests of air pollution sources.	✓	✓

Section 4.0 of this rule states district's authority to require record keeping, to make inspections, and to conduct tests of air pollution sources.

a. ABA Plant with Asphalt Blowing Still (S-36-4-6)

- Conditions 24 and 38 of the requirements for this permit unit assure compliance with this rule.

b. ABA Plant with Asphalt Blowing Still (S-36-5-3)

- Condition 3 of the requirements for this permit unit assures compliance with this rule.

c. Lube Oil Finishing Plant (S-36-37-10)

- Condition 36 of the requirements for this permit unit assures compliance with this rule.

d. Crude Unit and/or Visbreaking Unit (S-36-42-3)

- Condition 38 of the requirements for this permit unit assures compliance with this rule.

e. 103.4 MMBtu/hr Diesel Treating Unit (S-36-51-5)

- Conditions 44, 60, 61, 62, and 63 of the requirements for this permit unit assure compliance with this rule.

f. Fuel Gas System (S-36-80-1)

- Condition 11 of the requirements for this permit unit assures compliance with this rule.

g. 37,000 BBL Distillate Oil Tank (S-36-104-2)

- Condition 4 of the requirements for this permit unit assures compliance with this rule.

h. 187 BHP Caterpillar Emergency Diesel IC Engine (S-36-105-1)

- Condition 5 of the requirements for this permit unit assures compliance with this rule.

3. District Rule 1081, Source Sampling

District Rule 1081 has been submitted to the EPA to replace Kern County Rule 108.1, which is in the SIP. District Rule 1081 is as stringent as Kern County Rule 108.1, as shown on Table 2.

Table 2 - Comparison of District Rule 1081 and Kern County Rule 108.1

REQUIREMENTS	1081 District	108.1 Kern
Upon request of the APCO, the source shall provide info. and records to enable the APCO to determine when a representative sample can be taken.	✓	✓
The facility shall collect, have collected or allow the APCO to collect, a source sample	✓	✓
The source shall have District personnel present at a source test	✓	
The applicable test method, if not specified in the rule, shall be conducted in accordance with 40 CFR § 60, Appendix A	✓	
Test procedures: 1) arithmetic mean of three runs 2) a scheduled source test may not be discontinued solely due to the failure to meet the applicable standard(s), and 3) arithmetic mean of two runs is acceptable if circumstances beyond owner or operator control occurs.	✓	

Sections 3.0, 4.0, 5.0, 6.0, and 7.0 of District Rule 1081 set forth requirements for sampling facilities, collection of samples, test methods, test procedures, and administrative requirements, respectively.

a. Atmospheric/Vacuum Crude Unit #4 (S-36-1-4)

- Conditions 1, 30, 31, 32, and 33 of the requirements for this permit unit assure compliance with this rule.

b. Atmospheric Crude Unit #1 (S-36-2-3)

- Conditions 1, 23, 24, 25, and 26 of the requirements for this permit unit assure compliance with this rule.

c. ABA Plant with Asphalt Blowing Still (S-36-4-6)

- Conditions 1, 31, 32, 33, and 34 of the requirements for this permit unit assure compliance with this rule.

d. Lube Oil Finishing Plant (S-36-37-10)

- Conditions 1, 32, 33, 34, and 35 of the requirements for this permit unit assure compliance with this rule.

e. 31.25 MMBtu/hr Boiler (S-36-41-6)

- Conditions 1, 28, 29, 30, and 31 of the requirements for this permit unit assure compliance with this rule.

f. Crude Unit and/or Visbreaking Unit (S-36-42-3)

- Conditions 1, 31, 32, and 33 of the requirements for this permit unit assure compliance with this rule.

g. 103.4 MMBtu/hr Diesel Treating Unit (S-36-51-5)

- Conditions 51, 52, 53, and 54 of the requirements for this permit unit assure compliance with this rule.

4. District Rule 2010, <u>Permits Required</u>

District Rule 2010 sections 3.0 and 4.0 require any person building, modifying or replacing any operation that may cause the issuance of air contaminants to apply for an Authority to Construct (ATC) from the District in advance. The ATC will remain in effect until the Permit to Operate (PTO) is granted.

a. Petroleum Storage Tanks (S-36-8-1, -15-1, -27-1, -28-1, -48-1, and -50-1)

- Condition 1 of the requirements for these permit units assures compliance with this rule.

b. Petroleum Storage Tanks (S-36-18-1, -19-1, -20-1, -21-1, -22-1, -23-1, -24-1, -25-1, -34-1, -35-1, and -47-1)

- Conditions 1, 5, and 6 of the requirements for this permit units assure compliance with this rule.

c. Petroleum Storage Tanks (S-36-29-1, -30-1, and -31-1)

- Conditions 6 and 7 of the requirements for these permit units assure compliance with this rule.

d. 103.4 MMBtu/hr Diesel Treating Unit (S-36-51-5

- Conditions 2 through 18 of the requirements for this permit unit assure compliance with this rule.

e. Fuel Gas System (S-36-80-1)

- Condition 2 of the requirements for this permit unit assures compliance with this rule.

f. Naphtha Truck Loading Operation (S-36-82-1)

- Condition 1 of the requirements for this permit unit assures compliance with this rule.

g. Loading Racks (S-36-100-1, -101-2, and -102-1)

- Condition 1 of the requirements for this permit unit assures compliance with this rule.

h. Rail Car Loadout (S-36-103-1)

- Condition 1 of the requirements for this permit unit assures compliance with this rule.

5. District Rule 2520, Sections 9.4.2 and 9.5.2, <u>Federally Mandated Operating Permits</u>

Section 9.0

Section 9.0 of the rule identifies permit content requirements for active permit units. The following permit unit has been identified as "dormant", or not currently allowed to operate, by conditions on the Authority to Construct (ATC): S-36-76-4. Since the unit can not legally operate, no further evaluation of the permit content for this unit is required at this time. Permit condition 1 of the requirement for this permit unit, S-36-76-2, assures that all Title V requirements will be addressed prior to operation.

Section 9.4.2

This section requires that periodic monitoring and/or recordkeeping be performed if none is associated with a given emission limit to ensure compliance.

This will be supported by the following conditions in the requirements of these permit units.

a. Atmospheric/Vacuum Crude Unit #4 (S-36-1-4)

- Conditions 2, 5 through 14, 17, 18, 22, 23, 24, 26 through 29, and 34 through 44 of the requirements for this permit unit assure compliance with this rule.

b. Atmospheric Crude Unit #1 (S-36-2-3)

- Conditions 2, 5 through 14, 20 through 23, 27 through 31, and 33 through 39 of the requirements for this permit unit assure compliance with this rule.

c. ABA Plant with Asphalt Blowing Still (S-36-4-6)

- Conditions 2, 5 through 14, 18, 19, 26 through 30, 35 through 39, 43, and 45 of the requirements for this permit unit assure compliance with this rule.

d. ABA Plant with Asphalt Blowing Still (S-36-5-3)

- Condition 5 of the requirements for this permit unit assures compliance with this rule.

e. Petroleum Storage Tank (S-36-8-1)

- Conditions 2 and 4 of the requirements for this permit unit assure compliance with this rule.

f. Petroleum Storage Tank (S-36-9-1, -10-1, -12-1, -13-1, -14-1, -17-1, -39-1, -40-1, -59-1, -60-1, -61-1, -62-1, -63-1, -64-1, -65-1, -66-1, -67-1, -68-1, -69-1, -70-1, -71-1, -72-1)

- Conditions 5, 6, and 7 of the requirements for these permit units assure compliance with this rule.

g. Petroleum Storage Tank (S-36-15-1, 18-1, -19-1, -20-1, -21-1, -22-1, -23-1, -24-1, -25-1, -27-1, -28-1, -34-1, -35-1, -47-1, -48-1, -50-1)

- Conditions 2, 3, and 4 of the requirements for these permit units assure compliance with this rule.

h. Petroleum Storage Tank (S-36-26-1, -49-1)

- Conditions 11 and 12 of the requirements for these permit units assure compliance with this rule.

i. Lube Oil Finishing Plant (S-36-37-10)

- Conditions 2, 5 through 7, 26 through 31, 38, and 41 through 47 of the requirements for this permit unit assure compliance with this rule.

j. Solvent Storage Tank (S-36-38-2)

- Conditions 12, 13, and 14 of the requirements for this permit unit assure compliance with this rule.

k. 31.25 MMBtu/hr Boiler (S-36-41-6)

- Conditions 2, 5 through 14, 17, 18, 24 through 27, and 32 through 42 of the requirements for this permit unit assure compliance with this rule.

l. Crude Unit and/or Visbreaking Unit (S-36-42-3)

- Conditions 2, 5 through 13, 17, 18, 26 through 30, 34, 35, and 40 through 45 of the requirements for this permit unit assure compliance with this rule.

m. Solvent Storage Tank (S-36-44-1)

- Conditions 14, 15, and 16 of the requirements for this permit unit assure compliance with this rule.

n. 103.4 MMBtu/hr Diesel Treating Unit (S-36-51-5)

- Conditions 44, 47 through 50, 60, 61, 68, and 71 through 84 of the requirements for this permit unit assure compliance with this rule.

o. Petroleum Storage Tanks (S-36-58-1)

- Conditions 2 through 6 of the requirements for this permit unit assure compliance with this rule.

p. Fuel Gas System (S-36-80-1)

- Conditions 14 and 15 of the requirements for this permit unit assure compliance with this rule.

q. 84,000 Gallon Naphtha Storage Tank (S-36-81-1)

- Conditions 12, 14, and 15 of the requirements for this permit unit assure compliance with this rule.

r. Naphtha Truck Loading Operation (S-36-82-1)

- Conditions 2 and 8 of the requirements for this permit unit assure compliance with this rule.

s. 12.6 MMBtu/hr Oil/Gas Fired Standby Boiler (S-36-99-1)

- Condition 1, 4 through 11, and 18 through 20 of the requirement for this permit assure compliance with this rule.

t. Loading Racks (S-36-100-1, -102-1)

- Condition 2 of the requirements for these permit units assures compliance with this rule.

u. Loading Racks (S-36-101-2)

- Conditions 9 and 10 of the requirements for this permit unit assure compliance with this rule.

v. Railcar Loadout (S-36-103-1)

- Condition 2 of the requirements for this permit unit assures compliance with this rule.

w. 37,000 BBL Distillate Oil Tank (S-36-104-2)

- Conditions 10 and 11 of the requirements for this permit unit assure compliance with this rule.

x. 187 BHP Caterpillar Emergency Diesel IC Engine (S-36-105-1)

- Condition 8 of the requirements for this permit unit assures compliance with this rule.

y. 4,200,000 Gallon Internal Floating Roof Oil Storage Tank (S-36-108-1)

- Conditions 27 through 34 of the requirements for this permit unit assure compliance with this rule.

Section 9.5.2

This section requires retention of records of all required monitoring data and support information for a period of at least 5 years from the date of the monitoring sample, measurement, or report.

This will be supported by the following conditions in the requirements of these permit units.

a. Atmospheric/Vacuum Crude Unit #4 (S-36-1-4)

- Conditions 3 and 37 of the requirements for this permit unit assure compliance with this rule.

b. Atmospheric Crude Unit #1 (S-36-2-3)

- Conditions 3, 31, and 32 of the requirements for this permit unit assure compliance with this rule.

c. ABA Plant with Asphalt Blowing Still (S-36-4-6)

- Conditions 3, 36, and 39 of the requirements for this permit unit assure compliance with this rule.

d. Lube Oil Finishing Plant (S-36-37-10)

- Conditions 3, 39, and 40 of the requirements for this permit unit assure compliance with this rule.

e. Petroleum Storage Tanks (S-36-11-1, -16-1, -29-1, -30-1, and -31-1)

- Condition 5 of the requirements for this permit unit assures compliance with this rule.

f. 31.25 MMBtu/hr Boiler (S-36-41-6)

- Conditions 3, and 35 of the requirements for this permit unit assure compliance with this rule.

g. Crude Unit and/or Visbreaking Unit (S-36-42-3)

- Conditions 3, 38, and 39 of the requirements for this permit unit assure compliance with this rule.

h. ABA Plant with Asphalt Blowing Still (S-36-43-2)

- Condition 10 of the requirements for this permit unit assures compliance with this rule.

i. 103.4 MMBtu/hr Diesel Treating Unit (S-36-51-5)

- Conditions 63, and 69 of the requirements for this permit unit assure compliance with this rule.

j. 84,000 Gallon Naphtha Storage Tank (S-36-81-1)

- Condition 12 of the requirements for this permit unit assures compliance with this rule.

k. 12.6 MMBtu/hr Oil/Gas Fired Standby Boiler (S-36-99-1)

- Conditions 2, 20, and 21 of the requirements for this permit unit assure compliance with this rule.

l. 37,000 BBL Distillate Oil Tank (S-36-104-2)

- Condition 4 of the requirements for this permit unit assures compliance with this rule.

m. 187 BHP Caterpillar Emergency Diesel IC Engine (S-36-105-1)

- Conditions 5, and 7 of the requirements for this permit unit assure compliance with this rule.

n. 4,200,000 Gallon Internal Floating Roof Oil Storage Tank (S-36-108-1)

- Condition 46 of the requirements for this permit unit assures compliance with this rule.

6. District Rule 4001, <u>New Source Performance Standards</u>

This rule incorporates the New Source Performance Standards from Part 60, Chapter 1, Title 40, Code of Federal Regulations (CFR). All new sources of air pollution and modification of existing sources of air pollution shall comply with the standards, criteria, and requirements set forth therein.

a. 103.4 MMBtu/hr Diesel Treating Unit (S-36-51-5)

- Conditions 21, 24, and 55 through 59 of the requirements for this permit unit assure compliance with this rule.

b. 84,000 Gallon Naphtha Storage Tank (S-36-81-1)

- Condition 13 of the requirements for this permit unit assures compliance with this rule.

7. District Rules 4201, 3.1, Particulate Matter Concentration and 4301, 5.1 & 5.2.3, Fuel Burning Equipment

EPA issued a relative stringency finding, dated August 20, 1996, stating that District Rule 4201 is more stringent than SIP approved Kern County Rule 404. Section 3.0 of District Rule 4201 requires emissions to be at or below 0.1 grains of particulate matter per dry standard cubic foot of exhaust gas.

District Rules 4201, 3.1 and 4301, 5.1 & 5.2.3, contain limits on emissions of particulate matter (PM). The following analysis shows that the proposed PM requirements are as stringent as District Rules 4301 and 4201. Streamlining procedures, as documented in the following pages, are used to substitute the proposed set of requirements for the otherwise applicable requirements.

Step 1. Side-by-side Comparison of Applicable Requirements:

CITATION:	District Rule 4201	District Rule 4301	Proposed Requirements
WORK PRACTICE STANDARDS:	•None	•None	•None
EMISSION LIMIT:	•0.1 grain/cf, at dry standard conditions [4201, 3.1]	•0.1 grain/cf, calculated to 12% CO_2 at dry standard conditions [4301, 5.1] •10 lb/hr [4301, 5.2.3]	•0.1 grain/dscf [4201, 3.1] •0.1 grain/cf, calculated to 12% CO_2 at dry standard conditions [4301, 5.1] •10 lb/hr [4301, 5.2.3]
MONITORING:	•None	•None	•source testing when firing on residual oil (including crude) within 90 days of said firing [2520, 9.4.2]
RECORD KEEPING:	•None	•None	•record daily amount of all fuels combusted, the dates on which firing on any fuel other than certified gaseous or diesel fuel has occurred, as well as the type of non-certified fuel fired [2520, 9.4.2]
REPORTING:	•None	•None	•None
TEST METHODS:	•Particulate matter concentration - EPA Method 5 [4201, 4.1] •Stack gas velocity - EPA Method 2 [4201, 4.2] •Stack gas moisture - EPA Method 4 [4201, 4.3]	•Particulate matter concentration - EPA Method 5 [4301, 5.1] •Stack gas velocity - EPA Method 2 [4301, 5.5] •Stack gas moisture - EPA Method 4 [4301, 5.6]	•Particulate matter concentration - EPA Method 5 (note EPA Methods 2 and 4 are referenced within Method 5) [4301, 5.1 and 4201, 4.1]

Step 2. Select most stringent emission limit or performance standard:

The proposed PM emission limits of:

0.1 grain/dscf of gas calculated to 12% carbon dioxide, and

0.1 grain/dscf of gas, and

10 lb/hr

are at least as stringent as those imposed by District Rules 4201 and 4301, as demonstrated below:

Compliance with PM Limit - District Rule 4301, 5.1:

This rule requires PM emissions to be limited to the following:

0.1 grain per cubic foot of gas calculated to 12% carbon dioxide at dry standard conditions and

10 lb/hr

The proposed conditions include these requirements and are therefore at least as stringent as District Rule 4301.

Compliance with PM Limit - District Rule 4201:

This rule requires PM emissions to be limited to the following:

0.1 grain per cubic foot of gas at dry standard conditions

The excess air in the exhaust ranges from 0 to 4% when calculated at 12% carbon dioxide (see Attachment C). Since maximum particulate emissions occur at 0% excess air, which may occur at operating CO_2 levels and dry standard conditions, the above limit is also included as a condition of this template. The proposed limits are at least as stringent as the requirements of this rule.

Step 3. Conditions ensuring compliance with applicable requirements

An excess air concentration of 0% in the exhaust results in the maximum particulate matter concentration for any given emission rate. Therefore,

the following calculations use an uncorrected F factor to represent worst-case emissions. Calculations determining the excess air concentrations for 12% CO_2 are shown in Attachment C.

GASEOUS FUEL FIRED UNITS

The following calculations, using AP42 emission factors for natural gas, demonstrate that the emission of PM during the firing of gaseous fuels complies with the limits of these rules.

$$\left(\frac{13.7\ lb\ PM}{10^6\ cf}\right)\left(\frac{1\ scf}{900\ Btu}\right)\left(\frac{52.2\ MMBtu}{hr}\right)=\left(\frac{0.80\ lb\ PM}{hr}\right)<\left(\frac{10\ lb\ PM}{hr}\right)$$

$$\left(\frac{13.7\ lb\ \mathrm{PM}}{10^6\ ft^3}\right)\left(\frac{1\ scf}{900\ Btu}\right)\left(\frac{1\ MMBtu}{8710\ dscf}\right)\left(\frac{7000\ grain}{1\ lb}\right)=\left(\frac{0.01\ grain}{dscf}\right)<\left(\frac{0.1\ grain}{dscf}\right)$$

where:

$13.7\ \frac{lb\ PM}{10^6\ cf}$ = sum of filterable and condensable uncontrolled emission factors for natural gas-fired boilers (AP42, Table 1.4-2)

$\frac{900\ Btu}{1\ scf}$ = the minimum expected higher heating value of natural gas (AP42, Table 1.4.1)

$\frac{52.5\ MMBtu}{hr}$ = maximum heat input in this facility

$\frac{8710\ dscf}{1\ MMBtu}$ = F factor, Fd, for natural gas at 0% O_2 (40CFR60, App. A, Table 19-1)

$\frac{10{,}610\ \mathrm{w}scf}{1\ MMBtu}$ = F factor, Fw, for natural gas at 0% O_2 (40CFR60, App. A, Table 19-1)

$\frac{7000\ grain}{1\ lb}$ = conversion factor (AP42, Appendix A)

The only constituents found in non-regulated gas streams that contribute to the formation of PM are sulfur and, occasionally, trace amounts of metals. Any metals present in the gas stream are removed during the free water knock-out stage in the condenser. The results of source tests on units operating on natural gas show PM levels far below allowable levels (actual source tests are on file with the District). Based on these source

test results and the preceding compliance analysis, compliance with applicable PM limits is assured without the need for PM testing.

DIESEL FUEL OIL UNITS

For fuel oil fired units, the 12% CO_2 correction required by District Rule 4301 in the exhaust stream occurs at 4% O_2. A more conservative analysis is obtained by calculating emissions at 0% O_2 and thus, the following compliance analysis uses F-factors uncorrected from 0% O_2.

$$\left(\frac{2\ lb\ PM}{10^3\ gal}\right)\left(\frac{1\ gal}{137{,}000\ Btu}\right)\left(\frac{52.2\ MMBtu}{hr}\right) = 0.76\ \frac{lb\ PM}{hr} < 10\ \frac{lb\ PM}{hr}$$

$$\left(\frac{2\ lb\ PM}{10^3\ gal}\right)\left(\frac{1\ gal}{137{,}000\ Btu}\right)\left(\frac{1\ MMBtu}{9190\ dscf}\right)\left(\frac{7000\ gr}{1\ lb}\right) = \left(\frac{0.01\ grain}{dscf}\right) < \left(\frac{0.1\ grain}{dscf}\right)$$

where:

$\frac{2\ lb\ PM}{10^3\ gal}$ = the emission factor for filterable PM, distillate oil, (AP-42, Table 1.3-1)

$\frac{137{,}000\ Btu}{1\ gal}$ = heating value diesel oil (AP-42, Appendix A)

$\frac{52.2\ MMBtu}{hr}$ = maximum heat input for oil firing in this facility

$\frac{9190\ dscf}{MMBtu}$ = F factor, F_d, for oil (40CFR60, App. A, Meth. 19, Table 19-1)

$\frac{10{,}320\ wscf}{MMBtu}$ = F factor, F_w, for oil (40CFR60, App. A, Meth. 19, Table 19-1)

The preceding calculations demonstrate that the emissions of PM are expected to be well below applicable limits when fired on diesel fuel oil. Compliance with these limits is expected and, therefore, no testing, recordkeeping, reporting, or monitoring will be required for these units fired on diesel fuel.

RESIDUAL OIL FIRED(INCLUDING CRUDE OR TOPPED CRUDE)

Compliance with PM limits will be assured by permit conditions that require source testing when firing on residual oil (including crude or topped-crude). The operator is required to record daily amount of all fuels combusted, the dates on which firing on any fuel other than certified gaseous or diesel oil has occurred, as well as the type of

non-certified fuel fired. If a unit is fired on residual oil at any time during a calendar year, the operator is required to show compliance with the PM emission limits by source testing the unit during such firing and within 90 days of said firing.

Compliance with the all the proposed conditions of this streamlining action is as follows:

a. Atmospheric/Vacuum Crude Unit #4 (S-36-1-4)

- Conditions 2, 4, and 5 of the requirements for this permit unit assure compliance with this rule.

b. Atmospheric Crude Unit #1 (S-36-2-3)

- Conditions 2, 4, and 5 of the requirements for this permit unit assure compliance with this rule.

c. ABA Plant with Asphalt Blowing Still (S-36-4-6)

- Conditions 2, 4, and 5 of the requirements for this permit unit assure compliance with this rule.

d. Lube Oil Finishing Plant (S-36-37-10)

- Conditions 2 and 4 of the requirements for this permit unit assure compliance with this rule. This unit is only permitted to fire natural gas and therefore the requirement for source testing when firing residual oil is not required.

e. 31.25 MMBtu/hr Boiler (S-36-41-6)

- Conditions 2, 4, and 5 of the requirements for this permit unit assure compliance with this rule.

f. Crude Unit and/or Visbreaking Unit (S-36-42-3)

- Conditions 2, 4, and 5 of the requirements for this permit unit assure compliance with this rule.

g. 103.4 MMBtu/hr Diesel Treating Unit (S-36-51-5)

- Condition 70 of the requirements for this permit unit assures compliance with this rule. This unit is only permitted to fire natural gas, PSA offgas and refinery fuel gas and therefore the requirement for source testing when firing residual oil is not required.

h. 12.6 MMBtu/hr Standby Boiler (S-36-99-1)

- Conditions 1, 3, and 4 of the requirements for this permit unit assure compliance with this rule.

Step 4. Certify compliance

By complying with the conditions in the requirements for these permit units, the applicant is certifying compliance with all applicable requirements.

Step 5. Compliance schedule for new monitoring requirements

None

Step 6. Request for permit shield

District Rule 4201 has been submitted to the EPA to replace SIP approved Kern County Rule 404. The EPA issued a stringency finding dated August 20, 1996 stating that District Rules 4201 and 4301 are more stringent than the SIP approved Kern County Rule 404. By using the proposed requirements, the applicant is requesting a permit shield from the county SIP rules and of the requirements of District Rule 4201 and 4301. Permit shield has been included as a condition in the requirements for these permit units. See section X. on permit shields.

8. District Rule 4301, Section 5.2.1, <u>Fuel Burning Equipment</u>

Section 5.2.1 of District Rule 4301 limits the emission of SO_X to 200 lb/hr (calculated as SO_2). Assuming that all sulfur compounds are converted to SO_2, this is equivalent to 100 lb of elemental sulfur per hour (see attachment D). Operators have the option of complying with this emission limit by using certified fuels, by complying with fuel sulfur content limits, or by source testing the emission unit in combination with fuel analysis.

The following calculations, using AP-42 emission factors for natural gas and for diesel fuel oil, demonstrate that units using certified fuels are expected to comply with the limit of this rule.

Natural Gas Fired:

$$\frac{\left(100\frac{lb\ S}{hr}\right)\left(\frac{453.59\ g\ CH_4}{lb\ CH_4}\right)\left(\frac{23.7\ L\ CH_4}{gmol\ CH_4}\right)\left(\frac{0.00105\ MMBtu}{scf\ CH_4}\right)}{\left(\frac{16.04\ g\ CH_4}{gmol\ CH_4}\right)\left(\frac{28.317\ L\ CH_4}{scf\ CH_4}\right)\left(52.2\frac{MMBtu}{hr}\right)} = \left(\frac{0.05\ lb\ \mathrm{S}}{lb\ CH_4}\right) \approx 5\%$$

where:

$100\frac{lb\ S}{hr} = 200\frac{lb\ SO_X}{hr} =$ District Rule 4301, 5.2.1 emission limit (see Appendix F)

$\frac{453.59\ g\ CH_4}{lb\ CH_4} =$ conversion factor (AP-42, Appendix A)

$23.7\frac{L}{gmol} = \frac{(288.7K)\left(22.4\frac{L}{gmol}\right)}{273.15K}$ = molar volume of an ideal gas corrected to standard conditions (60 ^{o} F, 14.7 psi) per Charles' Law

$\frac{0.00105\ MMBtu}{scf\ CH_4} =$ heating value for natural gas (AP-42, Appendix A)

$\frac{16.04\ g\ CH_4}{gmol\ CH_4}$ = molecular weight of gaseous fuel

$\frac{28.317\ L\ CH_4}{scf\ CH_4}$ = conversion factor (AP-42, Appendix A)

$52.5\frac{MMBtu}{hr}$ = maximum heat input in this facility

The equation shows that using the emission rate limit of 200 lb SO_X/hr corresponds to natural gas with a 5% by weight sulfur content. Utilizing PUC regulated natural gas which has a maximum sulfur content of 0.017% [Public Utilities Code General Order 58-B] equates to an emission rate of less than the 200 lb SO_x/hr limit.

Units using PUC or FERC regulated natural gas will comply with this requirement.

Fuel Oil Fired:

$$\frac{\left(100\frac{lb\ S}{hr}\right)\left(\frac{0.137\ MMBtu}{1\ gallon\ fuel\ oil}\right)}{\left(\frac{7.05\ lb\ fuel\ oil}{1\ gallon\ fuel\ oil}\right)\left(52.2\frac{MMBtu}{hr}\right)} = \frac{0.037\ lb\ S}{lb\ fuel\ oil} \cong 3.7\%$$ weight sulfur content,

where:

$\left(100\frac{lb\ S}{hr}\right) = \left(200\frac{lb\ SO_X}{hr}\right)$ = District Rule 4301, 5.2.1 emission limit (see Appendix F)

$\left(\frac{7.05\ lb\ fuel\ oil}{1\ gallon\ fuel\ oil}\right)$ = density of distillate oil (AP-42, Appendix A)

$\left(52.2\frac{MMBtu}{hr}\right)$ = maximum heat input in this facility

$\left(\frac{0.137\ MMBtu}{1\ gallon\ fuel\ oil}\right)$ = higher heating value of distillate oil (AP-42, Appendix A)

The preceding analysis shows that using the allowable sulfur limit of 200 lb SO_2 per hour and using the maximum heat input of the largest heater in this facility equates to 3.7% by weight sulfur content. This demonstrates that using certified fuels with a sulfur limit of 0.5% by weight sulfur content would clearly comply with this requirement.

Using Non-certified Fuels:

This facility is using non-certified fuels and therefore the operator shall demonstrate compliance by fuel analysis of non-certified fuels, compliance shall be determined by multiplying the sulfur content of the fuel in lb/MMBtu by the maximum hourly heat input rating of the unit in MMBtu/hr, and comparing the result to the 100 lb sulfur per hour limit. Alternatively the operator may choose to source test to determine control efficiency and perform routine fuel analysis to determine uncontrolled emissions.

Compliance with this requirement is assured by the following conditions in the requirements for these permit units.

a. Atmospheric/Vacuum Crude Unit #4 (S-36-1-4)

- Conditions 6 through 12 of the requirements for this permit unit assure compliance with this rule.

b. Atmospheric Crude Unit #1 (S-36-2-3)

- Conditions 6 through 12 of the requirements for this permit unit assure compliance with this rule.

c. ABA Plant with Asphalt Blowing Still (S-36-4-6)

- Conditions 6 through 12 of the requirements for this permit unit assure compliance with this rule.

d. Lube Oil Finishing Plant (S-36-37-10)

- Conditions 5 through 10 of the requirements for this permit unit assure compliance with this rule.

e. 31.25 MMBtu/hr Boiler (S-36-41-6)

- Conditions 6 through 12 of the requirements for this permit unit assure compliance with this rule.

f. Crude Unit and/or Visbreaking Unit (S-36-42-3)

- Conditions 6 through 12 of the requirements for this permit unit assure compliance with this rule.

g. 103.4 MMBtu/hr Diesel Treating Unit (S-36-51-5)

- Conditions 68, 69, 71 through 76 of the requirements for this permit unit assure compliance with this rule.

h. 12.6 MMBtu/hr Oil/Gas Fired Standby Boiler (S-36-99-1)

- Conditions 5 through 11 of the requirements for this permit unit assure compliance with this rule.

9. District Rule 4301, Section 5.2.2, Fuel Burning Equipment

This rule requires NO_x emissions be limited to 140 lb/hr (calculated as NO_2). Converting to common units of measure:

NATURAL GAS FIRED:

$$\frac{\left(140\ \frac{lb\ NO_X}{hr}\right)\left(23.7\ \frac{L}{gmol}\right)\left(0.035315\ \frac{ft^3}{L}\right)\left(453.59\ \frac{g}{lb}\right)}{\left(8710\ \frac{dscf}{MMBtu}\right)\left(52.2\ \frac{MMBtu}{hr}\right)\left(46.01\ \frac{g\ NO_2}{gmol}\right)} = 0.00254 = 2540\ ppmv$$

FUEL OIL FIRED:

$$\frac{\left(140\ \frac{lb\ NO_X}{hr}\right)\left(23.7\ \frac{L}{gmol}\right)\left(0.035315\ \frac{ft^3}{L}\right)\left(453.59\ \frac{g}{lb}\right)}{\left(9190\ \frac{dscf}{MMBtu}\right)\left(52.2\ \frac{MMBtu}{hr}\right)\left(46.01\ \frac{g\ NO_2}{gmol}\right)} = .00241 = 2410\ ppmv$$

where:

$140\frac{lb \cdot NO_X}{hr}$ = NO_X emission rate limit per District Rule 4301, 5.2.2

$23.7\frac{L}{gmol} = \frac{(288.71K)\left(22.4\frac{L}{gmol}\right)}{273.15K}$ = molar volume of an ideal gas corrected to District standard conditions (60° F, 14.7 psi) per Charles' Law

$0.035315\frac{ft^3}{L}$ = conversion factor (AP42, Appendix A)

$453.59\frac{g}{lb}$ = conversion factor (AP42, Appendix A)

$8710\frac{dscf}{MMBtu}$ = F-factor, F_d, for natural gas (40CFR§60, App. A, Meth. 19, Table 19-1)

$9190\frac{dscf}{MMBtu}$ = F-factor, F_d, for oil (40 CFR§60, App. A, Meth. 19, Table 19-1)

$52.2\ \frac{MMBtu}{hr}$ = maximum heat input in this facility

$46.01\frac{g \cdot NO_2}{gmol}$ = molecular weight, NO_2

Compliance with District Rule 4301, section 5.2.2 is shown in the following conditions in the requirements for these permit units.

a. Atmospheric/Vacuum Crude Unit #4 (S-36-1-4)

- Conditions 22 through 25 of the requirements for this permit unit assure compliance with this rule.

b. Atmospheric Crude Unit #1 (S-36-2-3)

- Condition 15 of the requirements for this permit unit assures compliance with this rule.

c. ABA Plant with Asphalt Blowing Still (S-36-4-6)

- Condition 26 of the requirements for this permit unit assures compliance with this rule.

d. Lube Oil Finishing Plant (S-36-37-10)

- Conditions 26 and 27 of the requirements for this permit unit assure compliance with this rule.

e. 31.25 MMBtu/hr Boiler (S-36-41-6)

- Condition 22 of the requirements for this permit unit assures compliance with this rule.

f. Crude Unit and/or Visbreaking Unit (S-36-42-3)

- Condition 48 of the requirements for this permit unit assures compliance with this rule.

g. 103.4 MMBtu/hr Diesel Treating Unit (S-36-51-5)

- Conditions 35 through 39 of the requirements for this permit unit assure compliance with this rule.

h. 12.6 MMBtu/hr Oil/Gas Fired Standby Boiler (S-36-99-1)

- Conditions16 and 17 of the requirements for this permit unit assure compliance with this rule.

10. District Rule 4451, Valves, Pressure Relief Valves, Flanges, Threaded Connections and Process Drains at Petroleum Refineries and Chemical Plants and 40 CFR Part 60, Subpart GGG, Standards of Performance for Equipment Leaks of VOC in Petroleum Refineries

District Rule 4451 limits leaks from valves, pressure relief valves, flanges, threaded connections and process drains at petroleum refineries.

40 CFR Part 60, subpart GGG is the standards of performance for equipment leaks of VOC in petroleum refineries. The provisions of this subpart apply to affected facilities in petroleum refineries. Any affected facility that commences construction or modification after January 4, 1983, is subject to the requirements of this subpart. Section § 60.592(a) of subpart GGG requires that each owner or operator subject to the provisions of this subpart shall comply with the requirements of 40 CFR §§ 60.482-1 to 60.482-10 which are sections of 40 CFR Part 60, Subpart VV, Standards of performance for equipment leaks of VOC in the synthetic organic chemicals manufacturing industry. These standards limit leaks from pumps, compressors, pressure relief devices, sampling connections systems, open-ended valves or lines, valves, pumps, flanges, and connectors.

The following streamlining procedures of District Rule 4451 and 40 CFR 60.482 will propose a set of requirements for the otherwise similar applicable requirements.

Valves in Light Liquid Service

40 CFR 60.593(d) states that equipment is in light liquid service if the percent evaporated is greater than 10 percent at 150^{o}C as determined by ASTM Method D-86. In addition, 40 CFR 60.485(e) defines light liquid service has showing that all the following conditions apply: (1) The vapor pressure of one or more of the components is greater than 0.3 kPa at 20 °C. (2) The total concentration of the pure components having a vapor pressure

greater than 0.3 kPa at 20 °C is equal to or greater than 20 percent by weight. (3) The fluid is a liquid at operating conditions.

The following is a streamlining of applicable requirements for valves in light liquid service.

Step 1. Side-by-side Comparison of Applicable Requirements:

Valves in light liquid service	District Rule 4451	40 CFR 60.482-7, 60.482-8, 60.483-2	Proposed Requirements
Work Practice Standard	• Valves shall not leak liquid organic compounds at a rate of more than three (3) drops per minute or leak in excess of 10,000 ppm above background when measured at a distance of one (1) centimeter of the potential source with an instrument calibrated with methane. • All valves shall be inspected for leakage at least once every three (3) months. • Within 15 days after detection, any valve found to leak shall be repaired or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 25. • Every leaking valve shall be affixed with a record of inspection, which shall bear a legible record of all inspections for at least a fifteen month period or coded with the records kept in a centralized location. • Any leaking valve shall be identified by affixing a weatherproof, readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until repair and reinspection documents compliance with the requirements of this rule. • If less than two (2) percent of the all the valves are found to leak during each of five (5) consecutive quarterly inspections, the inspection frequency may be changed from quarterly to annual. If any annual inspection shows that two (2) percent or more of all the valves are leaking, then quarterly inspections of all the valves shall resume. • If a valve cannot be repaired to a no-leak condition without requiring the shutdown of essential refinery operations, the following repair schedule shall apply: If the leak rate is less than ten (10) drops per minute the APCO shall be notified of the expected date of repair, not to exceed one (1) year or the date of the next process unit turnaround	• Each valve shall be monitored monthly to detect leaks. • Valves in heavy liquid service shall be monitored within 5 days by the method specified in 40 CFR 60.485(b) if evidence of a potential leak is found by visual, audible, olfactory, or any other detection method. • For valves in light liquid or heavy liquid service: (1) A leak is detected if an instrument reading of 10,000 ppm or greater is measured using Method 21. • A first attempt at repair shall be made no later than 5 calendar days after each leak is detected. First attempts at repair include, but are not limited to, the following best practices where practicable: tightening of bonnet bolts; replacement of bonnet bolts; tightening of packing gland nuts; injection of lubricant into lubricated packing. • When a leak is detected, it shall be repaired as soon as practicable, but no later than 15 calendar days after the leak is detected. • A leaking valve shall be identified by attaching to the valve a weatherproof and readily visible identification, marked with the equipment identification number. The identification on a valve maybe removed after it has been monitored for 2 successive months and no leak has been detected during those 2 months. • Any valve for which a leak is not detected for 2 successive months may be monitored the first month of every quarter, beginning with the next quarter, until a leak is detected. If a leak is detected, the valve shall be monitored monthly until a leak is not detected for 2 successive months. • An owner or operator must notify the Administrator before implementing alternative work practices.	• Valves in light liquid or heavy liquid service shall not leak liquid organic compounds at a rate of more than three (3) drops per minute or leak in excess of 10,000 ppm above background when measured using Method 21. • Valves in heavy liquid service shall be monitored within 5 days with a portable hydrocarbon detection instrument if evidence of a potential leak is found by visual, audible, olfactory, or any other detection method. • Each valve in light liquid service shall be monitored monthly to detect leaks. • A first attempt at repair shall be made no later than 5 calendar days after each leak is detected. First attempts at repair include, but are not limited to, the following best practices where practicable: tightening of bonnet bolts; replacement of bonnet bolts; tightening of packing gland nuts; injection of lubricant into lubricated packing. • When a leak is detected, it shall be repaired as soon as practicable, but no later than 15 calendar days after the leak is detected. • Every leaking valve in light liquid service shall be affixed with a record of inspection, which shall bear a legible record of all inspections for at least a fifteen month period or coded with the records kept in a centralized location. • A leaking valve in light liquid or heavy liquid service shall be identified by attaching to the valve a weatherproof and readily visible identification, marked with the equipment identification number. The identification on a valve maybe removed after it has been monitored for 2 successive months and no leak has been detected during those 2 months. • Any valve in light liquid service for which a leak is not detected for 2 successive months may be monitored the first month of every quarter, beginning

Valves in light liquid service	District Rule 4451	40 CFR 60.482-7, 60.482-8, 60.483-2	Proposed Requirements
	whichever is less and the actual date of repair. If the leak rate is greater than nine (9) drops per minute or 10,000 ppm measure one (1) centimeter from the source, the following shall be required and the APCO shall be notified of an emergency repair, within 15 days after detection, to reduce the leak to less than ten (10) drops per minute or 10,000 ppm as methane measured one (1) centimeter from the source, or the venting, within 30 days after detection, of the emission to a flare or vapor control system that satisfies the requirements of 40 CFR 60.18 or is at least 95 percent efficient as measured by EPA Method 25, or a demonstration, within 30 days after detection, that the repair schedules are infeasible. The demonstration shall include documentation that the components is an essential device and that no vapor control device that satisfies the requirements of 40 CFR 60.18 or is at least 95 percent efficient as measured by EPA Method 25 exists.	• After 2 consecutive quarterly leak detection periods with the percent of valves leaking equal to or less than 2.0 percent, an owner or operator may begin to skip 1 of the quarterly leak detection periods. • After 5 consecutive quarterly leak detection periods with the percent of valves leaking equal to or less than 2.0 percent, an owner or operator may begin to skip 3 of the quarterly leak detection periods. • If the percent of valves leaking is greater than 2.0 percent, the owner or operator shall return to monthly monitoring of each valve but can again elect to use this alternative standard for valves. • Delay of repair for valves will be allowed if the owner or operator demonstrates that emissions of purged material resulting from immediate repair are greater than the fugitive emissions likely to result from delay of repair and when repair procedures are effected, the purged material is collected and destroyed or recovered in a control device complying with 40 CFR 60.482-10. Delay of repair beyond a process unit shutdown will be allowed for a valve, if valve assembly replacement is necessary during the process unit shutdown, valve assembly supplies have been depleted, and valve assembly supplies had been sufficiently stocked before the supplies were depleted. • Delay of repair beyond the next process unit shutdown will not be allowed unless the next process unit shutdown occurs sooner than 6 months after the first process unit shutdown.	with the next quarter, until a leak is detected. If a leak is detected, the valve shall be monitored monthly until a leak is not detected for 2 successive months. • An owner or operator must notify the Administrator before implementing alternative work practices. • After 2 consecutive quarterly leak detection periods with the percent of valves leaking equal to or less than 2.0 percent, an owner or operator may begin to skip 1 of the quarterly leak detection periods. • After 5 consecutive quarterly leak detection periods with the percent of valves leaking equal to or less than 2.0 percent, an owner or operator may begin to skip 3 of the quarterly leak detection periods. • If the percent of valves leaking is greater than 2.0 percent, the owner or operator shall return to monthly monitoring of each valve but can again elect to use this alternative standard for valves. • Delay of repair for valves will be allowed if the owner or operator demonstrates that emissions of purged material resulting from immediate repair are greater than the fugitive emissions likely to result from delay of repair and when repair procedures are effected, the purged material is collected and destroyed or recovered in a control device complying with 40 CFR 60.482-10. Delay of repair beyond a process unit shutdown will be allowed for a valve, if valve assembly replacement is necessary during the process unit shutdown, valve assembly supplies have been depleted, and valve assembly supplies had been sufficiently stocked before the supplies were depleted. • Delay of repair beyond the next process unit shutdown will not be allowed unless the next process unit shutdown occurs sooner than 6 months after the first process unit shutdown

Step 2. Select most stringent requirement:

The proposed requirements for work practice standards are as follows:

> Valves in light liquid service shall not leak liquid organic compounds at a rate of more than three (3) drops per minute or leak in excess of 10,000 ppm above background when measured using Method 21.
>
> Valves in heavy liquid service shall be monitored within 5 days by the method specified in 40 CFR 60.485(b) if evidence of a potential leak is found by visual, audible, olfactory, or any other detection method.
>
> Each valve in light liquid service shall be monitored monthly to detect leaks.
>
> A first attempt at repair shall be made no later than 5 calendar days after each leak is detected. First attempts at repair include, but are not limited to, the following best practices where practicable: tightening of bonnet bolts; replacement of bonnet bolts; tightening of packing gland nuts; injection of lubricant into lubricated packing.
>
> When a leak is detected, it shall be repaired as soon as practicable, but no later than 15 calendar days after the leak is detected.
>
> Every leaking valve in light liquid service shall be affixed with a record of inspection, which shall bear a legible record of all inspections for at least a fifteen month period or coded with the records kept in a centralized location.
>
> A leaking valve in light liquid service shall be identified by attaching to the valve a weatherproof and readily visible identification, marked with the equipment identification number. The identification on a valve maybe removed after it has been monitored for 2 successive months and no leak has been detected during those 2 months.
>
> Any valve in light liquid service for which a leak is not detected for 2 successive months may be monitored the first month of every quarter, beginning with the next quarter, until

a leak is detected. If a leak is detected, the valve shall be monitored monthly until a leak is not detected for 2 successive months.

An owner or operator must notify the Administrator before implementing alternative work practices.

After 2 consecutive quarterly leak detection periods with the percent of valves leaking equal to or less than 2.0 percent, an owner or operator may begin to skip 1 of the quarterly leak detection periods.

After 5 consecutive quarterly leak detection periods with the percent of valves leaking equal to or less than 2.0 percent, an owner or operator may begin to skip 3 of the quarterly leak detection periods.

If the percent of valves leaking is greater than 2.0 percent, the owner or operator shall return to monthly monitoring of each valve but can again elect to use alternative standard for valves.

Delay of repair for valves in light liquid service will be allowed if the owner or operator demonstrates that emissions of purged material resulting from immediate repair are greater than the fugitive emissions likely to result from delay of repair and when repair procedures are effected, the purged material is collected and destroyed or recovered in a control device complying with 40 CFR 60.482-10. Delay of repair beyond a process unit shutdown will be allowed for a valve, if valve assembly replacement is necessary during the process unit shutdown, valve assembly supplies have been depleted, and valve assembly supplies had been sufficiently stocked before the supplies were depleted.

Delay of repair beyond the next process unit shutdown will not be allowed unless the next process unit shutdown occurs sooner than 6 months after the first process unit shutdown.

The proposed requirements are at least as stringent as those imposed by District Rule 4451 and 40 CFR 60.482-7 as demonstrated below:

<u>Compliance with the work practice standard of District Rule 4451:</u>

This rule requires the following work practice standards:

Valves shall not leak liquid organic compounds at a rate of more than three (3) drops per minute or leak in excess of 10,000 ppm above background when measured at a distance of one (1) centimeter of the potential source with an instrument calibrated with methane.

All valves shall be inspected for leakage at least once every three (3) months.

Within 15 days after detection, any valve found to leak shall be repaired or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 25.

Every leaking valve shall be affixed with a record of inspection, which shall bear a legible record of all inspections for at least a fifteen month period or coded with the records kept in a centralized location.

Any leaking valve shall be identified by affixing a weatherproof, readily visible, tag bearing the date on which the leak is detected. The tag shall remain in place until repair and reinspection documents compliance with the requirements of this rule.

If less than two (2) percent of the all the valves are found to leak during each of five (5) consecutive quarterly inspections, the inspection frequency may be changed from quarterly to annual. If any annual inspection shows that two (2) percent or more of all the valves are leaking, then quarterly inspections of all the valves shall resume.

If a valve cannot be repaired to a no-leak condition without requiring the shutdown of essential refinery operations, the following repair schedule shall apply: If the leak rate is less than ten (10) drops per minute the APCO shall be notified of the expected date of repair, not to exceed one (1) year or the date of the next process unit turnaround whichever is less and the actual date of repair. If the leak rate is greater than nine (9) drops per minute or 10,000 ppm measure one (1) centimeter from the source, the following shall be required

and the APCO shall be notified of an emergency repair, within 15 days after detection, to reduce the leak to less than ten (10) drops per minute or 10,000 ppm as methane measured one (1) centimeter from the source, or the venting, within 30 days after detection, of the emission to a flare or vapor control system that satisfies the requirements of 40 CFR 60.18 or is at least 95 percent efficient as measured by EPA Method 25, or a demonstration, within 30 days after detection, that the repair schedules are infeasible. The demonstration shall include documentation that the components is an essential device and that no vapor control device that satisfies the requirements of 40 CFR 60.18 or is at least 95 percent efficient as measured by EPA Method 25 exists.

The proposed requirements include these requirements and are therefore at least as stringent as District Rule 4451.

Compliance with the work practice standards of 40 CFR 60.482-7 and 60.482-8:

This rule requires the following work practice standards:

Each valve shall be monitored monthly to detect leaks.

For valves in light liquid service: (1) A leak is detected if an instrument reading of 10,000 ppm or greater is measured using Method 21.

Valves in heavy liquid service shall be monitored within 5 days by the method specified in 40 CFR 60.485(b) if evidence of a potential leak is found by visual, audible, olfactory, or any other detection method.

A first attempt at repair shall be made no later than 5 calendar days after each leak is detected. First attempts at repair include, but are not limited to, the following best practices where practicable: tightening of bonnet bolts; replacement of bonnet bolts; tightening of packing gland nuts; injection of lubricant into lubricated packing.

When a leak is detected, it shall be repaired as soon as practicable, but no later than 15 calendar days after the leak is detected.

A leaking valve shall be identified by attaching to the valve a weatherproof and readily visible identification, marked with the equipment identification number. The identification on a valve maybe removed after it has been monitored for 2 successive months and no leak has been detected during those 2 months.

Any valve for which a leak is not detected for 2 successive months may be monitored the first month of every quarter, beginning with the next quarter, until a leak is detected. If a leak is detected, the valve shall be monitored monthly until a leak is not detected for 2 successive months.

An owner or operator must notify the Administrator before implementing alternative work practices.

After 2 consecutive quarterly leak detection periods with the percent of valves leaking equal to or less than 2.0 percent, an owner or operator may begin to skip 1 of the quarterly leak detection periods.

After 5 consecutive quarterly leak detection periods with the percent of valves leaking equal to or less than 2.0 percent, an owner or operator may begin to skip 3 of the quarterly leak detection periods.

If the percent of valves leaking is greater than 2.0 percent, the owner or operator shall return to monthly monitoring of each valve but can again elect to use alternative standard for valves.

Delay of repair for valves will be allowed if the owner or operator demonstrates that emissions of purged material resulting from immediate repair are greater than the fugitive emissions likely to result from delay of repair and when repair procedures are effected, the purged material is collected and destroyed or recovered in a control device complying with 40 CFR 60.482-10. Delay of repair beyond a process unit shutdown will be allowed for a valve, if valve assembly replacement is necessary during the process unit shutdown, valve assembly supplies have been depleted, and valve assembly supplies had been sufficiently stocked before the supplies were depleted.

Delay of repair beyond the next process unit shutdown will not be allowed unless the next process unit shutdown occurs sooner than 6 months after the first process unit shutdown.

The proposed requirements include these requirements and are therefore at least as stringent as 40 CFR 60.482-7.

Step 3. Conditions ensuring compliance with applicable requirements.

Conditions 60 through 65, 72, 73, 76, and 79 of the facility wide requirements assure compliance with the applicable requirements of this streamlining action.

Step 4. Certify Compliance

By complying with the conditions in the requirements for these permit units, the applicant is certifying compliance with all applicable requirements.

Step 5. Compliance schedule for new monitoring requirements

Not applicable.

Step 6. Permit Shield

By using this streamlining process the applicant is requesting permit shield from the requirements of District Rule 4451 and 40 CFR 60.482-7. See condition 99 of the facility wide requirements.

Pressure Relief Valves

40 CFR 60.593(d) states that equipment is in light liquid service if the percent evaporated is greater than 10 percent at 150°C as determined by ASTM Method D-86. In addition, 40 CFR 60.485(e) defines light liquid service has showing that all the following conditions apply: (1) The vapor pressure of one or more of the components is greater than 0.3 kPa at 20 °C. (2) The total concentration of the pure components having a vapor pressure greater than 0.3 kPa at 20 °C is equal to or greater than 20 percent by weight. (3) The fluid is a liquid at operating conditions.

The following is a streamlining procedure of applicable requirements for pressure relief valves.

Step 1. Side-by-side Comparison of Applicable Requirements

Pressure Relief Valves	District Rule 4451	40 CFR 60.482-8	Proposed Requirements
Work Practice Standards	• Pressure relief valves (PRVs) shall not leak in excess of 10,000 ppm above background when measured in the plane at the centroid of any atmospheric vent with an instrument calibrated with methane. • All pressure relief valves shall be inspected for leakage at least once every three (3) months. • Within (3) days after any pressure relief valve vents to atmosphere the operator shall inspect with a portable hydrocarbon detection instrument any such pressure relief valve and shall repair any leak. • Within 15 days after detection any pressure relief valve found to leak shall be repaired or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 25. • Every leaking PRV shall be affixed with a record of inspection which shall bear a legible record of all inspections for at least a fifteen month period or coded with the records kept in a centralized location. • Any leaking component shall be identified by affixing a weatherproof, readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until repair and reinspection documents compliance with the requirements of this rule. If a pressure relief valve cannot be repaired to a no-	• Pressure relief devices in light liquid or heavy liquid service shall be monitored within 5 days by the method specified in 40 CFR 60.485(b) if evidence of a potential leak is found by visual, audible, olfactory, or any other detection method. If an instrument reading of 10,000 ppm or greater is measured, a leak is detected. • When a leak is detected, it shall be repaired as soon as practicable, but not later 15 calendar days after it is detected. • A first attempt at repair shall be made no later than 5 calendar days after each leak is detected. First attempts at repair include, but are not limited to, the following best practices where practicable: tightening of bonnet bolts; replacement of bonnet bolts; tightening of packing gland nuts; injection of lubricant into lubricated packing. • Delay of repair of equipment for which leaks have been detected will be allowed if the repair is technically infeasible without a process unit shutdown. Repair of this equipment shall occur before the end of the next process unit shutdown. Delay of repair of equipment will be allowed for equipment which is isolated from the process and which does not remain in VOC service. A weatherproof and readily visible identification, marked with the equipment identification number, shall be attached to the leaking equipment. The	• Pressure relief valves (PRVs) in light liquid or heavy liquid service shall not leak in excess of 10,000 ppm above background when measured in the plane at the centroid of any atmospheric vent with an instrument calibrated with methane. • All pressure relief valves in light liquid service shall be inspected for leakage at least once every three (3) months. • Pressure relief valves in light liquid or heavy liquid service shall be monitored within 5 days with a portable hydrocarbon detection instrument if evidence of a potential leak is found by visual, audible, olfactory, or any other detection methods. • Within three (3) days after any pressure relief valve in light liquid vents to atmosphere the operator shall inspect with a portable hydrocarbon detection instrument any such pressure relief valve and shall repair any leak. • Within 15 days after detection any pressure relief valve in light liquid or heavy liquid service found to leak shall be repaired or vented to flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 25. • A first attempt at repair shall be made no later than 5 calendar days after each leak is detected. First attempts at repair include, but are not limited to, the following best practices where practicable:

Pressure Relief Valves	District Rule 4451	40 CFR 60.482-8	Proposed Requirements
	leak condition without requiring the shutdown of essential refinery operations, the following repair schedule shall apply: If the leak rate is less than ten (10) drops per minute the APCO shall be notified of the expected date of repair, not to exceed one (1) year or the date of the next process unit turnaround whichever is less and the actual date of repair. If the leak rate is greater than nine (9) drops per minute or 10,000 ppm measure one (1) centimeter from the source, the following shall be required and the APCO shall be notified of an emergency repair, within 15 days after detection, to reduce the leak to less than ten (10) drops per minute or 10,000 ppm as methane measured one (1) centimeter from the source, or the venting, within 30 days after detection, of the emission to a flare or vapor control system that satisfies the requirements of 40 CFR 60.18 or is at least 95 percent efficient as measured by EPA Method 25, or a demonstration, within 30 days after detection, that the repair schedules are infeasible. The demonstration shall include documentation that the components is an essential device and that no vapor control device that satisfies the requirements of 40 CFR 60.18 or is at least 95 percent efficient as measured by EPA Method 25 exists.	identification may be removed after it has been repaired.	tightening of bonnet bolts; replacement of bonnet bolts; tightening of packing gland nuts; injection of lubricant into lubricated packing. • If a pressure relief valve in light liquid or heavy liquid service cannot be repaired to a no-leak condition without requiring the shutdown of essential refinery operations, the following repair schedule shall apply: If the leak rate is less than ten (10) drops per minute the APCO shall be notified of the expected date of repair, not to exceed one (1) year or the date of the next process unit turnaround whichever is less and the actual date of repair. If the leak rate is greater than nine (9) drops per minute or 10,000 ppm measured using Method 21, the following shall be required and the APCO shall be notified of an emergency repair, within 15 days after detection, to reduce the leak to less than ten (10) drops per minute or 10,000 ppm as methane measured using Method 21, or the venting, within 30 days after detection, of the emission to a flare or vapor control system that satisfies the requirements of 40 CFR 60.18 or is at least 95 percent efficient as measured by EPA Method 25, or a demonstration, within 30 days after detection, that the repair schedules are infeasible. The demonstration shall include documentation that the components is an essential device and that no vapor control device that satisfies the requirements of 40 CFR 60.18 or is at least 95 percent efficient as measured by EPA Method 25 exists. • Every leaking PRV shall be affixed with a record of inspection which shall bear a legible record of all inspections for at least a fifteen month period or coded with the records kept in a centralized location. • Any leaking component shall be identified by affixing a weatherproof, readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until repair and reinspection documents compliance with the requirements of this rule.

Step 2. Select most stringent requirement:

The proposed requirements for work practice standards are as follows:

> Pressure relief valves (PRVs) in light liquid or heavy liquid service shall not leak in excess of 10,000 ppm above background when measured in the plane at the centroid of any atmospheric vent with an instrument calibrated with methane.
>
> All pressure relief valves in light liquid service shall be inspected for leakage at least once every three (3) months.
>
> Pressure relief valves in light liquid or heavy liquid service shall be monitored within 5 days with a portable hydrocarbon detection instrument if evidence of a potential leak is found by visual, audible, olfactory, or any other detection methods.
>
> Within three (3) days after any pressure relief valve in light liquid vents to atmosphere the operator shall inspect with a portable hydrocarbon detection instrument any such pressure relief valve and shall repair any leak.
>
> Within 15 days after detection any pressure relief valve in light liquid or heavy liquid service found to leak shall be repaired or vented to flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 25.
>
> A first attempt at repair shall be made no later than 5 calendar days after each leak is detected. First attempts at repair include, but are not limited to, the following best practices where practicable: tightening of bonnet bolts; replacement of bonnet bolts; tightening of packing gland nuts; injection of lubricant into lubricated packing.
>
> If a pressure relief valve in light liquid or heavy liquid service cannot be repaired to a no-leak condition without requiring the shutdown of essential refinery operations, the following repair schedule shall apply: If the leak rate is less than ten (10) drops per minute the APCO shall be notified of the expected date of repair, not to exceed one (1) year or the date of the next process unit turnaround whichever is less

and the actual date of repair. If the leak rate is greater than nine (9) drops per minute or 10,000 ppm measured using Method 21, the following shall be required and the APCO shall be notified of an emergency repair, within 15 days after detection, to reduce the leak to less than ten (10) drops per minute or 10,000 ppm as methane measured using Method 21, or the venting, within 30 days after detection, of the emission to a flare or vapor control system that satisfies the requirements of 40 CFR 60.18 or is at least 95 percent efficient as measured by EPA Method 25, or a demonstration, within 30 days after detection, that the repair schedules are infeasible. The demonstration shall include documentation that the components is an essential device and that no vapor control device that satisfies the requirements of 40 CFR 60.18 or is at least 95 percent efficient as measured by EPA Method 25 exists.

Every leaking PRV shall be affixed with a record of inspection which shall bear a legible record of all inspections for at least a fifteen month period or coded with the records kept in a centralized location.

Any leaking component shall be identified by affixing a weatherproof, readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until repair and reinspection documents compliance with the requirements of this rule.

The proposed requirements are at least as stringent as those imposed by District Rule 4451 and 40 CFR 60.482-8.

Compliance with the work practice standard of District Rule 4451:

This rule requires the following work practice standards for pressure relief valves:

Pressure relief valves (PRVs) shall not leak in excess of 10,000 ppm above background when measured in the plane at the centroid of any atmospheric vent with an instrument calibrated with methane.

All pressure relief valves shall be inspected for leakage at least once every three (3) months.

Within (3) days after any pressure relief valve vents to atmosphere the operator shall inspect with a portable hydrocarbon detection instrument any such pressure relief valve and shall repair any leak.

Within 15 days after detection any pressure relief valve found to leak shall be repaired or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 25.

Every leaking PRV shall be affixed with a record of inspection which shall bear a legible record of all inspections for at least a fifteen month period or coded with the records kept in a centralized location.

Any leaking component shall be identified by affixing a weatherproof, readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until repair and reinspection documents compliance with the requirements of this rule.

If a pressure relief valve cannot be repaired to a no-leak condition without requiring the shutdown of essential refinery operations, the following repair schedule shall apply: If the leak rate is less than ten (10) drops per minute the APCO shall be notified of the expected date of repair, not to exceed one (1) year or the date of the next process unit turnaround whichever is less and the actual date of repair. If the leak rate is greater than nine (9) drops per minute or 10,000 ppm measure one (1) centimeter from the source, the following shall be required and the APCO shall be notified of an emergency repair, within 15 days after detection, to reduce the leak to less than ten (10) drops per minute or 10,000 ppm as methane measured one (1) centimeter from the source, or the venting, within 30 days after detection, of the emission to a flare or vapor control system that satisfies the requirements of 40 CFR 60.18 or is at least 95 percent efficient as measured by EPA Method 25, or a demonstration, within 30 days after detection, that the repair schedules are infeasible. The demonstration shall include documentation that the components is an essential device and that no vapor control device that satisfies the

requirements of 40 CFR 60.18 or is at least 95 percent efficient as measured by EPA Method 25 exists.

Compliance with the work practice standards of 40 CFR 60.482-8:

This rule requires the following work practice standards for pressure relief valves in light liquid or heavy liquid service.

Pressure relief devices in light liquid or heavy liquid service shall be monitored within 5 days by the method specified in 40 CFR 60.485(b) if evidence of a potential leak is found by visual, audible, olfactory, or any other detection method. If an instrument reading of 10,000 ppm or greater is measured, a leak is detected.

When a leak is detected, it shall be repaired as soon as practicable, but not later 15 calendar days after it is detected.

A first attempt at repair shall be made no later than 5 calendar days after each leak is detected. First attempts at repair include, but are not limited to, the following best practices where practicable: tightening of bonnet bolts; replacement of bonnet bolts; tightening of packing gland nuts; injection of lubricant into lubricated packing.

Delay of repair of equipment for which leaks have been detected will be allowed if the repair is technically infeasible without a process unit shutdown. Repair of this equipment shall occur before the end of the next process unit shutdown. Delay of repair of equipment will be allowed for equipment which is isolated from the process and which does not remain in VOC service.

A weatherproof and readily visible identification, marked with the equipment identification number, shall be attached to the leaking equipment. The identification may be removed after it has been repaired.

The proposed requirements include these requirements and are therefore at least as stringent as 40 CFR 60.482-8.

Step 3. Conditions ensuring compliance with applicable requirements.

Conditions 45 through 50, 72, 73, 76 and 79 of the facility wide requirements assure compliance with the applicable requirements of this streamlining action.

Step 4. Certify Compliance

By complying with the conditions in the requirements for these permit units, the applicant is certifying compliance with all applicable requirements.

Step 5. Compliance schedule for new monitoring requirements

Not applicable.

Step 6. Permit Shield

By using this streamlining process the applicant is requesting permit shield from the requirements of District Rule 4451 and 40 CFR 60.482-8. See conditions 99 of the facility wide requirements.

Flanges and Threaded Connections

The following is a streamlining procedure of applicable requirements for flanges and threaded connections in light liquid service.

Step 1. Side-by-side Comparison of Applicable Requirements:

Flanges and Threaded Connections	District Rule 4451	40 CFR 60.482-8	Proposed Requirements
Work Practice Standards	• Flanges and Threaded Connections shall not leak in excess of 10,000 ppm above background when measured at a distance of one (1) centimeter of the potential source with an instrument calibrated with methane or drip liquid organic compounds at a rate of more than three (3) drops per minute. • Flanges shall be inspected at least once every 12 months. • Threaded connections shall be inspected for leakage at least once every three (3) months. • Every leaking flange and threaded connection shall be affixed with a record of inspection which shall bear a legible record of all inspections for at least a fifteen month period or coded with the records kept in a centralized location. • If any flange and threaded connection cannot be repaired to a no-leak condition without requiring the shutdown of essential refinery operations, the following repair schedule shall apply: If the leak rate is less than ten (10) drops per minute the APCO shall be notified of the expected date of repair, not to exceed one (1) year or the date of the next process unit turnaround whichever is less and the actual date of repair. If the leak rate is greater than nine (9) drops per minute or 10,000 ppm measure one (1) centimeter from the source, the following shall be required and the APCO shall be notified of an emergency repair, within 15 days after detection, to reduce the leak to less than ten (10) drops per minute or 10,000 ppm as methane measured one (1) centimeter from the source, or the venting, within 30 days after detection, of the emission to a flare or vapor control system that satisfies the requirements of 40 CFR 60.18 or is at least 95 percent efficient as measured by EPA Method 25, or a demonstration,	• Flanges and other connectors shall not leak equal to or greater than an instrument reading of 10,000 ppm as measured by EPA Method 21. Flanges and other connectors shall be monitored within 5 days by EPA Method 21 if evidence of a potential leak is found by visual, audible, olfactory, or any other detection method. • A first attempt at repair shall be made no later than 5 calendar days after each leak is detected. First attempts at repair include, but are not limited to, the following best practices where practicable: tightening of bonnet bolts; replacement of bonnet bolts; tightening of packing gland nuts; injection of lubricant into lubricated packing. • A leak shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected. • Delay of repair of equipment for which leaks have been detected will be allowed if the repair is technically infeasible without a process unit shutdown. Repair of this equipment shall occur before the end of the next process unit shutdown. Delay of repair of equipment will be allowed for equipment which is isolated from the process and which does not remain in VOC service. • A weatherproof and readily visible identification, marked with the equipment identification number, shall be attached to the leaking equipment. The identification on equipment may be removed after it has been repaired.	• Flanges and Threaded Connections shall not leak in excess of 10,000 ppm above background when measured using Method 21 or drip liquid organic compounds at a rate of more than three (3) drops per minute. • Flanges in light liquid service shall be inspected at least once every 12 months. • Threaded connections shall be inspected for leakage at least once every three (3) months. • Flanges and threaded connectors in shall be monitored within 5 days by EPA Method 21 if evidence of a potential leak is found by visual, audible, olfactory, or any other detection method. • A first attempt at repair shall be made no later than 5 calendar days after each leak is detected. First attempts at repair include, but are not limited to, the following best practices where practicable: tightening of bonnet bolts; replacement of bonnet bolts; tightening of packing gland nuts; injection of lubricant into lubricated packing. • When a leak is detected, it shall be repaired as soon as practicable, but no later than 15 calendar days after the leak is detected. • If any flange and threaded connection cannot be repaired to a no-leak condition without requiring the shutdown of essential refinery operations, the following repair schedule shall apply: If the leak rate is less than ten (10) drops per minute the APCO shall be notified of the expected date of repair, not to exceed one (1) year or the date of the next process unit turnaround whichever is less and the actual date of repair. If the leak rate is greater than nine (9) drops per minute or 10,000 ppm measured using Method 21, the following shall be required and the APCO shall be notified of an emergency repair,

Flanges and Threaded Connections	District Rule 4451	40 CFR 60.482-8	Proposed Requirements
	within 30 days after detection, that the repair schedules are infeasible. The demonstration shall include documentation that the components is an essential device and that no vapor control device that satisfies the requirements of 40 CFR 60.18 or is at least 95 percent efficient as measured by EPA Method 25 exists. • A leaking component shall be identified by affixing a weatherproof, readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until repair and reinspection documents compliance with the requirement of this rule.		within 15 days after detection, to reduce the leak to less than ten (10) drops per minute or 10,000 ppm as methane measured using Method 21, or the venting, within 30 days after detection, of the emission to a flare or vapor control system that satisfies the requirements of 40 CFR 60.18 or is at least 95 percent efficient as measured by EPA Method 25, or a demonstration, within 30 days after detection, that the repair schedules are infeasible. The demonstration shall include documentation that the components is an essential device and that no vapor control device that satisfies the requirements of 40 CFR 60.18 or is at least 95 percent efficient as measured by EPA Method 25 exists. • Every leaking flange and threaded connection shall be affixed with a record of inspection which shall bear a legible record of all inspections for at least a fifteen month period or coded with the records kept in a centralized location. • A leaking component shall be identified by affixing a weatherproof, readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until repair and reinspection documents compliance with the requirement of this rule.

Step 2. Select most stringent requirements:

The proposed requirements for work practice standards are as follows:

> Flanges and Threaded Connections service shall not leak in excess of 10,000 ppm above background when measured at a distance of one (1) centimeter of the potential source with an instrument calibrated with methane or drip liquid organic compounds at a rate of more than three (3) drops per minute.
>
> Flanges in light liquid service shall be inspected at least once every 12 months.
>
> Threaded connections in light liquid service shall be inspected for leakage at least once every three (3) months.
>
> Flanges and threaded connectors shall be monitored within 5 days by EPA Method 21 if evidence of a potential leak is found by visual, audible, olfactory, or any other detection method.
>
> A first attempt at repair shall be made no later than 5 calendar days after each leak is detected. First attempts at repair include, but are not limited to, the following best practices where practicable: tightening of bonnet bolts; replacement of bonnet bolts; tightening of packing gland nuts; injection of lubricant into lubricated packing.
>
> When a leak is detected, it shall be repaired as soon as practicable, but no later than 15 calendar days after the leak is detected.
>
> If any flange and threaded connection cannot be repaired to a no-leak condition without requiring the shutdown of essential refinery operations, the following repair schedule shall apply: If the leak rate is less than ten (10) drops per minute the APCO shall be notified of the expected date of repair, not to exceed one (1) year or the date of the next process unit turnaround whichever is less and the actual date of repair. If the leak rate is greater than nine (9) drops per minute or 10,000 ppm measured using Method 21, the following shall be required and the APCO shall be notified of

an emergency repair, within 15 days after detection, to reduce the leak to less than ten (10) drops per minute or 10,000 ppm as methane measured using Method 21, or the venting, within 30 days after detection, of the emission to a flare or vapor control system that satisfies the requirements of 40 CFR 60.18 or is at least 95 percent efficient as measured by EPA Method 25, or a demonstration, within 30 days after detection, that the repair schedules are infeasible. The demonstration shall include documentation that the components is an essential device and that no vapor control device that satisfies the requirements of 40 CFR 60.18 or is at least 95 percent efficient as measured by EPA Method 25 exists.

Every leaking flange and threaded connection shall be affixed with a record of inspection which shall bear a legible record of all inspections for at least a fifteen month period or coded with the records kept in a centralized location.

A leaking component shall be identified by affixing a weatherproof, readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until repair and reinspection documents compliance with the requirement of this rule.

The proposed requirements are at least as stringent as those imposed by District Rule 4451 and 40 CFR 60.482-8.

Compliance with the work practice standards of District Rule 4451:

This rule requires the following work practice standards for flanges and threaded connections:

Flanges and Threaded Connections shall not leak in excess of 10,000 ppm above background when measured at a distance of one (1) centimeter of the potential source with an instrument calibrated with methane or drip liquid organic compounds at a rate of more than three (3) drops per minute.

Flanges shall be inspected at least once every 12 months.

Threaded connections shall be inspected for leakage at least once every three (3) months.

> Every leaking flange and threaded connection shall be affixed with a record of inspection which shall bear a legible record of all inspections for at least a fifteen month period or coded with the records kept in a centralized location.
>
> If any flange and threaded connection cannot be repaired to a no-leak condition without requiring the shutdown of essential refinery operations, the following repair schedule shall apply: If the leak rate is less than ten (10) drops per minute the APCO shall be notified of the expected date of repair, not to exceed one (1) year or the date of the next process unit turnaround whichever is less and the actual date of repair. If the leak rate is greater than nine (9) drops per minute or 10,000 ppm measure one (1) centimeter from the source, the following shall be required and the APCO shall be notified of an emergency repair, within 15 days after detection, to reduce the leak to less than ten (10) drops per minute or 10,000 ppm as methane measured one (1) centimeter from the source, or the venting, within 30 days after detection, of the emission to a flare or vapor control system that satisfies the requirements of 40 CFR 60.18 or is at least 95 percent efficient as measured by EPA Method 25, or a demonstration, within 30 days after detection, that the repair schedules are infeasible. The demonstration shall include documentation that the components is an essential device and that no vapor control device that satisfies the requirements of 40 CFR 60.18 or is at least 95 percent efficient as measured by EPA Method 25 exists.
>
> A leaking component shall be identified by affixing a weatherproof, readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until repair and reinspection documents compliance with the requirement of this rule.

The proposed requirements include these requirements and are therefore at least as stringent as District Rule 4451.

Compliance with the work practice standards of 40 CFR 60.482-8:

This rule requires the following work practice standards for flanges and connectors:

Flanges and other connectors shall not leak equal to or greater than an instrument reading of 10,000 ppm as measured by EPA Method 21.

Flanges and other connectors shall be monitored within 5 days by EPA Method 21 if evidence of a potential leak is found by visual, audible, olfactory, or any other detection method.

A first attempt at repair shall be made no later than 5 calendar days after each leak is detected. First attempts at repair include, but are not limited to, the following best practices where practicable: tightening of bonnet bolts; replacement of bonnet bolts; tightening of packing gland nuts; injection of lubricant into lubricated packing.

A leak shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected.

Delay of repair of equipment for which leaks have been detected will be allowed if the repair is technically infeasible without a process unit shutdown. Repair of this equipment shall occur before the end of the next process unit shutdown. Delay of repair of equipment will be allowed for equipment which is isolated from the process and which does not remain in VOC service.

A weatherproof and readily visible identification, marked with the equipment identification number, shall be attached to the leaking equipment. The identification on equipment may be removed after it has been repaired.

The proposed requirements are at least as stringent as 40 CFR 60.482-8.

Step 3. Conditions ensuring compliance with applicable requirements.

Conditions 66 through 70, 72, 73, 75, 76 and 79 of the facility wide requirements assure compliance with the applicable requirements of this streamlining action.

Step 4. Certify Compliance

By complying with the conditions in the requirements for these permit units, the applicant is certifying compliance with all applicable requirements.

Step 5. Compliance schedule for new monitoring requirements

Not applicable.

Step 6. Permit Shield

By using this streamlining process the applicant is requesting permit shield from the requirements of District Rule 4451 and 40 CFR 60.482-8. See conditions 99 of the facility wide requirements.

Recordkeeping, and Test Methods for Valves, Pressure Relief Valves, Flanges Threaded Connections, pumps and compressors

District Rule 4451 and 40 CFR 60.485 and 60.486 have recordkeeping, and test method requirements for equipment in petroleum refineries.

The following is a streamlining of applicable requirements for equipment in petroleum refineries.

Step 1. Side-by-side Comparison of Applicable Requirements

	District Rule 4451	40 CFR 60.485 and 60.486	Proposed Requirements
Recordkeeping	• Operator shall maintain an inspection log containing, at a minimum, the following: (a) name, location, type of components, and description of any unit where leaking components are found.(b) date of leak detection, emission level (ppm) of leak, and method of detection. (c) date and emission level of recheck after leak is repaired. (d) identification of leaks that cannot be repaired until next process unit turnaround.(e) total number of components inspected, and total number and percentage of leaking components found. • Copies of inspection log shall be retained by the operator for a minimum of two (2) years after the date of an entry. • Copies of the inspection log shall be made available upon request to District personnel.	• When a leak is detected from valves, PRVs, flanges, threaded connection, pumps, and compressors, the following information shall be recorded in a log and kept for 2 years in a readily accessible location:: (a) the instrument and operator identification numbers and the equipment identification number. (b) the date the leak was detected and the dates of each attempt to repair the leak. (c) Repair methods applied in each attempt to repair the leak. (d) "Above 10,000" if the maximum instrument reading measured after each repair attempt is equal to or greater than 10,000 ppm. (e) "Repair delayed" and the reason for the delay if a leak is not repaired within 15 calendar days after discovery of the leak. (f) the signature of the owner or operator (or designate) whose decision it was that repair could not be effected without a process shutdown. (g) the expected date of successful repair of the leak if a leak is not repaired within 15 days. (h) dates of process unit shutdown that occur while the equipment is unrepaired. (i) the date of successful repair of the leak. • The following information shall be recorded in a log and shall be kept in a readily accessible location: (a) a list of identification numbers for equipment subject to the requirements of this subpart GGG; (b) a list of identification numbers for equipment that are designated for no detectable emissions under the provisions of 40 CFR 60.482-7(f); (c) a list of identification numbers for valves that are designated as unsafe-to-monitor, (d) an explanation for each valve stating why the valve is unsafe-to-monitor, and the plan for monitoring each valve; (e) a list of identification numbers for valves that are designated as difficult-to-monitor, an explanation for each valve stating why the valve is difficult-to-monitor, and the schedule for monitoring each valve; (f) total number of components inspected, and total number and percentage of leaking components found.	• When a leak is detected from valves, PRVs, flanges, threaded connection, pumps, and compressors, the following information shall be recorded in a log and kept in a readily accessible location: (a) the instrument and operator identification numbers and the equipment identification number. (b) the date the leak was detected, emission level (ppm) of leak, method of detection and the dates of each attempt to repair the leak. (c) Repair methods applied in each attempt to repair the leak. (d) Emission level (ppm) after each repair attempt. (e) "Repair delayed" and the reason for the delay if a leak is not repaired within 15 calendar days after discovery of the leak. (f) the signature of the owner or operator (or designate) whose decision it was that repair could not be effected without a process shutdown. (g) the expected date of successful repair of the leak if a leak is not repaired within 15 days. (h) dates of process unit shutdown that occur while the equipment is unrepaired. (i) the date of successful repair of the leak and emission level of recheck. • The following information shall be recorded in a log and shall be kept in a readily accessible location: (a) a list of identification numbers for equipment subject to the requirements of this subpart GGG; (b) a list of identification numbers for equipment that are designated for no detectable emissions under the provisions of 40 CFR 60.482-7(f); (c) a list of identification numbers for valves that are designated as unsafe-to-monitor, (d) an explanation for each valve stating why the valve is unsafe-to-monitor, and the plan for monitoring each valve; (e) a list of identification numbers for valves that are designated as difficult-to-monitor, an explanation for each valve stating why the valve is difficult-to-monitor, and the schedule for monitoring each valve; (f) total number of components inspected, and total number and percentage of leaking components found. • Copies of inspection log and support information shall be retained by the operator for a minimum of five (5) years after the date of an entry and be made available upon request to District personnel.
Test Methods	• Leak detection shall be performed with a portable hydrocarbon detection instrument in accordance with EPA Method 21.	• EPA Method 21 shall be used to determine the presence of leaking sources.	• Leak detection shall be performed with a portable hydrocarbon detection instrument in accordance with EPA Method 21.

Step 2. Select most stringent requirement:

The proposed requirements for recordkeeping and test methods are as follows:

Recordkeeping

When a leak is detected from valves, PRVs, flanges, threaded connection, pumps, and compressors, the following information shall be recorded in a log and kept in a readily accessible location: (a) the instrument and operator identification numbers and the equipment identification number. (b) the date the leak was detected, emission level (ppm) of leak, method of detection and the dates of each attempt to repair the leak. (c) Repair methods applied in each attempt to repair the leak. (d) Emission level (ppm) after each repair attempt. (e) "Repair delayed" and the reason for the delay if a leak is not repaired within 15 calendar days after discovery of the leak. (f) the signature of the owner or operator (or designate) whose decision it was that repair could not be effected without a process shutdown. (g) the expected date of successful repair of the leak if a leak is not repaired within 15 days. (h) dates of process unit shutdown that occur while the equipment is unrepaired. (i) the date of successful repair of the leak and emission level of recheck.

The following information shall be recorded in a log and shall be kept in a readily accessible location: (a) a list of identification numbers for equipment subject to the requirements of this subpart GGG; (b) a list of identification numbers for equipment that are designated for no detectable emissions under the provisions of 40 CFR 60.482-7(f); (c) a list of identification numbers for valves that are designated as unsafe-to-monitor, (d) an explanation for each valve stating why the valve is unsafe-to-monitor, and the plan for monitoring each valve; (e) a list of identification numbers for valves that are designated as difficult-to-monitor, an explanation for each valve stating why the valve is difficult-to-monitor, and the schedule for monitoring each valve; (f) total number of components inspected, and total number and percentage of leaking components found.

Copies of inspection log and support information shall be retained by the operator for a minimum of five (5) years after the date of an entry and be made available upon request to District personnel.

Test Methods

Leak detection shall be performed with a portable hydrocarbon detection instrument in accordance with EPA Method 21.

The proposed requirements are at least as stringent as those imposed by District Rule 4451 and 40 CFR 60.485 and 486.

Compliance with the recordkeeping and test methods of District Rule 4451:

This rule requires the following recordkeeping and test method:

Recordkeeping

Operator shall maintain an inspection log containing, at a minimum, the following: (a) name, location, type of components, and description of any unit where leaking components are found.(b) date of leak detection, emission level (ppm) of leak, and method of detection. (c) date and emission level of recheck after leak is repaired. (d) identification of leaks that cannot be repaired until next process unit turnaround.(e) total number of components inspected, and total number and percentage of leaking components found.

Copies of inspection log shall be retained by the operator for a minimum of two (2) years after the date of an entry.

Copies of the inspection log shall be made available upon request to District personnel.

Test Methods

Leak detection shall be performed with a portable hydrocarbon detection instrument in accordance with EPA Method 21.

The proposed requirements include these requirements and are therefore at least as stringent as District Rules 4451 and 4452.

Compliance with the recordkeeping and test methods of 40 CFR 60.485 and 60.486:

This rule requires the following recordkeeping and test method:

Recordkeeping

When a leak is detected from valves, PRVs, flanges, threaded connection, pumps, and compressors, the following information shall be recorded in a log and kept for 2 years in a readily accessible location:: (a) the instrument and operator identification numbers and the equipment identification number. (b) the date the leak was detected and the dates of each attempt to repair the leak. (c) Repair methods applied in each attempt to repair the leak. (d) "Above 10,000" if the maximum instrument reading measured after each repair attempt is equal to or greater than 10,000 ppm. (e) "Repair delayed" and the reason for the delay if a leak is not repaired within 15 calendar days after discovery of the leak. (f) the signature of the owner or operator (or designate) whose decision it was that repair could not be effected without a process shutdown. (g) the expected date of successful repair of the leak if a leak is not repaired within 15 days. (h) dates of process unit shutdown that occur while the equipment is unrepaired. (i) the date of successful repair of the leak.

The following information shall be recorded in a log and shall be kept in a readily accessible location: (a) a list of identification numbers for equipment subject to the requirements of this subpart GGG; (b) a list of identification numbers for equipment that are designated for no detectable emissions under the provisions of 40 CFR 60.482-7(f); (c) a list of identification numbers for valves that are designated as unsafe-to-monitor, (d) an explanation for each valve stating why the valve is unsafe-to-monitor, and the plan for monitoring each valve; (e) a list of identification numbers for valves that are designated as difficult-to-monitor, an explanation for each valve stating why the valve is difficult-to-monitor, and the schedule for monitoring each valve; (f)

total number of components inspected, and total number and percentage of leaking components found.

Test Method

EPA Method 21 shall be used to determine the presence of leaking sources.

The proposed requirements include these requirements and are therefore as stringent as 40 CFR 60.485 and 60.486.

Step 3. Conditions ensuring compliance with applicable requirements.

Condition 78 of the facility wide requirements assures compliance with the applicable requirements of this streamlining action.

Step 4. Certify Compliance

By complying with the conditions in the requirements for these permit units, the applicant is certifying compliance with all applicable requirements.

Step 5. Compliance schedule for new monitoring requirements

Not applicable.

Step 6. Permit Shield

By using this streamlining process the applicant is requesting permit shield from the recordkeeping and test method requirements of District Rule 4451 and 40 CFR 60.485 and 40 CFR 60.486. See conditions 99 of the facility wide requirements.

11. District Rule 4452, Pump and Compressor Seals at Petroleum Refineries and Chemical Plants and 40 CFR Part 60, Subpart GGG, Standards of Performance for Equipment Leaks of VOC in Petroleum Refineries

District Rule 4452 limits leaks from pumps and compressors and associated seals that may result in fugitive emissions of VOC at petroleum refineries. In addition, District Rule 4452 addresses test methods and recordkeeping requirements.

40 CFR Part 60, subpart GGG is the standards of performance for equipment leaks of VOC in petroleum refineries. Subpart GGG requires that each owner or operator shall comply with the requirements of 40 CFR 60.482-2, 60.482-3, 60.485 and 60.486 which are requirements for pumps, compressors, test methods, and recordkeeping.

The recordkeeping requirements of District Rule 4452 are the same as District Rule 4451. The streamlining of applicable recordkeeping requirements between District Rule 4452 and 40 CFR 60.486 are evaluated previously in the section IX.B.11.

The following streamlining procedures of District Rule 4452 and 40 CFR 60.482 will propose a set of requirements for the otherwise similar applicable requirements.

Pumps in Light Liquid Service

40 CFR 60.593(d) states that equipment is in light liquid service if the percent evaporated is greater than 10 percent at 150°C as determined by ASTM Method D-86. In addition, 40 CFR 60.485(e) defines light liquid service has showing that all the following conditions apply: (1) The vapor pressure of one or more of the components is greater than 0.3 kPa at 20 °C. (2) The total concentration of the pure components having a vapor pressure greater than 0.3 kPa at 20 °C is equal to or greater than 20 percent by weight. (3) The fluid is a liquid at operating conditions.

The following is a streamlining procedure of applicable requirements for pumps in light liquid service.

Step 1. Side-by-side Comparison of Applicable Requirements:

Pumps in Light Liquid Service	District Rule 4452	40 CFR 60.482-2	Proposed Requirements
Work Practice Standard	• Operator shall not use any pump unless such pump does not leak. • Pumps shall not leak in excess of 10,000 ppm above background when measured at a distance of one (1) centimeter from the potential source with an instrument calibrated with methane or the drip liquid VOCs at a rate of more than three (3) drops per minute. • Pumps shall be inspected for leaks at least once every three (3) months. • Pumps shall be visually inspected weekly. • Whenever volatile organic liquids are observed dripping from a pump seal, the seal shall be checked within three (3) days with a portable hydrocarbon detection instrument to determine if a leak is present or the drippage stopped within the same time frame. If a leak is present, the leak shall be repaired. • Any person operating a device handling VOC which is leaking shall repair the leaking device within 15 calendar days. • If the leaking device is essential and cannot be repaired within 15 days after detection, one (1) of the following actions shall be taken: replace the leaking device and inspect for leaks within three days after detection, vent emissions to vapor recovery device that is at least 94 percent efficient as measured by EPA Method 25, or to a flare that satisfies the requirements of 40 CFR 60.18, or	• Each pump in light liquid service shall be monitored monthly to detect leaks. • Each pump in light liquid service shall be checked by visual inspection each calendar week for indications of liquids dripping from the pump seal. • A leak is detected if an instrument reading of 10,000 ppm or greater is measured or if there are indications of liquids dripping from the pump seal. • When a leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected. A first attempt at repair shall be made no later than 5 calendar days after each leak is detected. • Delay of repair of equipment will be allowed if the repair is technically infeasible without a process unit shutdown. Repair of this equipment shall occur before the end of the next process unit shutdown. Delay of repair of equipment will be allowed for equipment which is isolated from the process and which does not remain in VOC service. Delay of repair for pumps will be allowed if repair requires the use of a dual mechanical seal system that includes a barrier fluid system, and repair is completed as soon as practicable, but not later than 6 months after the leak was detected. • A weatherproof and readily visible identification, marked with the equipment identification number, shall be attached to the	• Operator shall not use any pump in light liquid service unless such pump does not leak. • Pumps in light liquid service shall not leak in excess of 10,000 ppm above background when measured at a distance of one (1) centimeter from the potential source with an instrument calibrated with methane or drip liquid VOCs from the pump seal. • Each pump in light liquid service shall be checked by visual inspection each calendar week for indications of liquids dripping from the pump seal and shall be monitored monthly with a portable hydrocarbon detection instrument to detect leaks. • When a pump leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected. A first attempt at repair shall be made no later than 5 calendar days after each leak is detected. • If the leaking pump is essential and cannot be repaired within 15 days after detection, one (1) of the following actions shall be taken: replace the leaking device and inspect for leaks within three days after detection, vent emissions to vapor recovery device that is at least 94 percent efficient as measured by EPA Method 25, or to a flare that satisfies the requirements of 40 CFR 60.18, or repair the essential device to eliminate the leak during the next process unit shutdown, but in no case later than one (1) year from the date of the

Pumps in Light Liquid Service	District Rule 4452	40 CFR 60.482-2	Proposed Requirements
	repair the essential device to eliminate the leak during the next process unit shutdown, but in no case later than one (1) year from the date of the original leak detection. • A readily visible identification, in the form of a weather-proof tag shall be attached to any device which leaks. Pumps to be repaired at the next shutdown shall be tagged, marked or coded in a manner easily identifiable by District personnel.	leaking equipment. The identification may be removed after it has been repaired.	original leak detection. • A readily visible identification, in the form of a weather-proof tag marked with the equipment identification number, shall be attached to any device which leaks. The identification may be removed after it has been repaired. Pumps to be repaired at the next shutdown shall be tagged, marked or coded in a manner easily identifiable by District personnel.
Test Methods	• Sampling measurements shall be performed with a portable hydrocarbon detection instrument in accordance with Method 21, 40 CFR Part 60. • Sampling of seal shall be performed one (1) centimeter from the outer end of the shaft seal interface or at a distance of one (1) centimeter of any other point on the seal which could leak. • Sampling of atmospheric vents on pumps shall be measured in the plane of the opening of the vent at the centroid.	• EPA Method 21 shall be used to determine the presence of leaking sources.	• Sampling measurements shall be performed with a portable hydrocarbon detection instrument in accordance with EPA Method 21, 40 CFR Part 60. • Sampling of seal shall be performed one (1) centimeter from the outer end of the shaft seal interface or at a distance of one (1) centimeter of any other point on the seal which could leak. • Sampling of atmospheric vents on pumps shall be measured in the plane of the opening of the vent at the centroid.

Step 2. Select most stringent requirement:

The proposed requirements for work practice standards and test methods are as follows:

Work Practice Standards

Operator shall not use any pump unless such pump does not leak.

Pumps in light liquid service shall not leak in excess of 10,000 ppm above background when measured at a distance of one (1) centimeter from the potential source with an instrument calibrated with methane or drip liquid VOCs from the pump seal.

Each pump in light liquid service shall be checked by visual inspection each calendar week for indications of liquids dripping from the pump seal and shall be monitored monthly with a portable hydrocarbon detection instrument to detect leaks.

When a pump leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected. A first attempt at repair shall be made no later than 5 calendar days after each leak is detected.

If the leaking pump is essential and cannot be repaired within 15 days after detection, one (1) of the following actions shall be taken: replace the leaking device and inspect for leaks within three days after detection, vent emissions to vapor recovery device that is at least 94 percent efficient as measured by EPA Method 25, or to a flare that satisfies the requirements of 40 CFR 60.18, or repair the essential device to eliminate the leak during the next process unit shutdown, but in no case later than one (1) year from the date of the original leak detection.

A readily visible identification, in the form of a weather-proof tag marked with the equipment identification number, shall be attached to any device which leaks. The identification may be removed after it has been repaired. Pumps to be repaired at the next shutdown shall be tagged, marked or coded in a manner easily identifiable by District personnel.

Test Methods

Sampling measurements shall be performed with a portable hydrocarbon detection instrument in accordance with EPA Method 21, 40 CFR Part 60.

Sampling of seal shall be performed one (1) centimeter from the outer end of the shaft seal interface or at a distance of one (1) centimeter of any other point on the seal which could leak.

Sampling of atmospheric vents on pumps shall be measured in the plane of the opening of the vent at the centroid.

The proposed requirements are at least as stringent as those imposed by District Rule 4452 and 40 CFR 40.482-2 as demonstrated below:

Compliance with the work practice standards and test methods of District 4452:

This rule requires the following work practice standards and test method:

Work Practice Standards

Operator shall not use any pump unless such pump does not leak.

Pumps shall not leak in excess of 10,000 ppm above background when measured at a distance of one (1) centimeter from the potential source with an instrument calibrated with methane or the drip liquid VOCs at a rate of more than three (3) drops per minute.

Pumps shall be inspected for leaks at least once every three (3) months.

Pumps shall be visually inspected weekly.

Whenever volatile organic liquids are observed dripping from a pump seal, the seal shall be checked within three (3) days with a portable hydrocarbon detection instrument to

determine if a leak is present or the drippage stopped within the same time frame. If a leak is present, the leak shall be repaired.

Any person operating a device handling VOC which is leaking shall repair the leaking device within 15 calendar days.

If the leaking device is essential and cannot be repaired within 15 days after detection, one (1) of the following actions shall be taken: replace the leaking device and inspect for leaks within three days after detection, vent emissions to vapor recovery device that is at least 94 percent efficient as measured by EPA Method 25, or to a flare that satisfies the requirements of 40 CFR 60.18, or repair the essential device to eliminate the leak during the next process unit shutdown, but in no case later than one (1) year from the date of the original leak detection.

A readily visible identification, in the form of a weather-proof tag shall be attached to any device which leaks. Pumps to be repaired at the next shutdown shall be tagged, marked or coded in a manner easily identifiable by District personnel.

Test Methods

Sampling measurements shall be performed with a portable hydrocarbon detection instrument in accordance with EPA Method 21, 40 CFR Part 60.

Sampling of seal shall be performed one (1) centimeter from the outer end of the shaft seal interface or at a distance of one (1) centimeter of any other point on the seal which could leak.

Sampling of atmospheric vents on pumps shall be measured in the plane of the opening of the vent at the centroid.

The proposed requirements include these requirements and are therefore at least as stringent as District Rule 4452.

Compliance with work practice standards and test methods of 40 CFR 60.482-2:

This rule requires the following work practice standards and test methods:

Work Practice Standards

Each pump shall be monitored monthly to detect leaks.

Each pump shall be checked by visual inspection each calendar week for indications of liquids dripping from the pump seal.

A leak is detected if an instrument reading of 10,000 ppm or greater is measured or if there are indications of liquids dripping from the pump seal.

When a leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected. A first attempt at repair shall be made no later than 5 calendar days after each leak is detected.

Delay of repair of equipment will be allowed if the repair is technically infeasible without a process unit shutdown. Repair of this equipment shall occur before the end of the next process unit shutdown. Delay of repair of equipment will be allowed for equipment which is isolated from the process and which does not remain in VOC service. Delay of repair for pumps will be allowed if repair requires the use of a dual mechanical seal system that includes a barrier fluid system, and repair is completed as soon as practicable, but not later than 6 months after the leak was detected.

A weatherproof and readily visible identification, marked with the equipment identification number, shall be attached to the leaking equipment. The identification may be removed after it has been repaired.

Test Method

EPA Method 21 shall be used to determine the presence of leaking sources.

The proposed requirements are least as stringent as this rule.

Step 3. Conditions ensuring compliance with applicable requirements.

Conditions 56, 58 through 60, and 76 of the facility wide requirements assure compliance with the applicable requirements of this streamlining action.

Step 4. Certify Compliance

By complying with the conditions in the requirements for these permit units, the applicant is certifying compliance with all applicable requirements.

Step 5. Compliance schedule for new monitoring requirements

Not applicable.

Step 6. Permit Shield

By using this streamlining process the applicant is requesting permit shield from the requirements of District Rule 4451 and 4452 and 40 CFR 60.482-2 and 40 CFR 60.485. See conditions 99 of the facility wide requirements.

Compressors

The following is a streamlining procedure of applicable requirements for compressors in light liquid service.

Step 1. Side-by-side Comparison of Applicable Requirements:

Compressors	District Rule 4452	40 CFR 60.482-3	Proposed Requirements
Work Practice Standards	• Operator shall not use any compressors unless such compressor does not leak. • Compressors shall not leak in excess of 10,000 ppm above background when measured at a distance of one (1) centimeter from the potential source with an instrument calibrated with methane and/or drip liquid VOCs at a rate of more than three (3) drops per minute. • Compressors shall be inspected for leaks at least once every three (3) months. • Leaking compressors shall be repaired within 15 calendar days. If the leaking compressor is essential and cannot be repaired within 15 days after detection, the following actions shall be taken: replace the leaking compressor and inspect for leaks within three days after detection, vent emissions to a vapor recovery device that is at least 95 percent efficient as measured by EPA Method 25, or to a flare that satisfies the requirements of 40 CFR 60.18, or repair the essential device to eliminate the leak during the next process unit shutdown, but in no case later than one (1) year from the date of the original leak detection. • A readily visible identification, in the form of a weather-proof tag shall be attached to any device which leaks. Devices to repaired at the next shutdown shall be tagged, marked or coded in a manner easily identifiable by District personnel.	• Each compressor shall be equipped with a seal system that includes a barrier fluid system and that prevents leakage of VOC to the atmosphere. • Each compressor seal system shall be; operated with the barrier fluid at a pressure that is greater than the compressor stuffing box pressure; or equipped with a barrier fluid system that is connected by a closed vent system to a control device that complies with the requirements of 40 CFR 60.482-10; or equipped with a system that purges the barrier fluid into a process stream with zero VOC emissions to the atmosphere. • The barrier fluid system shall be in heavy liquid service or shall not be in VOC service. • Each barrier fluid system shall be equipped with a sensor that will detect failure of the seal system, barrier fluid system, or both. • Each sensor shall be checked daily or shall be equipped with an audible alarm. • If the sensor indicates failure of the seal system, the barrier system, or both, a leak is detected. • When a leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected. • A first attempt at repair shall be made no later than 15 calendar days after each leak is detected. • Delay of repair of equipment for which leaks have been detected will be allowed if the repair is technically infeasible without a process unit shutdown. Repair shall occur before the end of the next process unit shutdown. • Delay of repair of equipment will be allowed for equipment which is isolated from the process and which does not remain in VOC service. • A weatherproof and readily visible identification, marked with the equipment identification number, shall be attached to the leaking equipment. The identification may be removed after it has been repaired.	• Operator shall not use any compressors in light liquid service unless such compressor does not leak. • Each compressor in light liquid service shall be equipped with a seal system that includes a barrier fluid system and that prevents leakage of VOC to the atmosphere. • Each compressor seal system shall be; operated with the barrier fluid at a pressure that is greater than the compressor stuffing box pressure; or equipped with a barrier fluid system that is connected by a closed vent system to a control device that complies with the requirements of 40 CFR 60.482-10; or equipped with a system that purges the barrier fluid into a process stream with zero VOC emissions to the atmosphere. • The compressor seal barrier fluid system shall be in heavy liquid service or shall not be in VOC service. Each compressor seal barrier fluid system shall be equipped with a sensor that will detect failure of the seal system, barrier fluid system, or both. Each sensor shall be checked daily or shall be equipped with an audible alarm. If the sensor indicates failure of the seal system, the barrier system, or both, a leak is detected. • When a leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected. • If the leaking compressor is essential and cannot be repaired within 15 days after detection, the following actions shall be taken: replace the leaking compressor and inspect for leaks within three days after detection, vent emissions to a vapor recovery device that is at least 95 percent efficient as measured by EPA Method 25, or to a flare that satisfies the requirements of 40 CFR 60.18, or repair the essential device to eliminate the leak during the next process unit shutdown, but in no case later than one (1) year from the date of the original leak detection. • A weatherproof and readily visible identification, marked with the equipment identification number, shall be attached to the leaking equipment. The identification may be removed after it has been repaired. Devices to repaired at the next shutdown shall be tagged, marked or coded in a manner easily identifiable by District personnel.
Test Methods	• Sampling measurements shall be performed with a portable hydrocarbon detection	• EPA Method 21 shall be used to determine the presence of leaking sources.	• Sampling measurements shall be performed with a portable hydrocarbon detection instrument in

Compressors	District Rule 4452	40 CFR 60.482-3	Proposed Requirements
	instrument in accordance with Method 21, 40 CFR Part 60. • Sampling of seal shall be performed one (1) centimeter from the outer end of the shaft seal interface or at a distance of one (1) centimeter of any other point on the seal which could leak. • Sampling of atmospheric vents on compressor seal fluid systems shall be measured in the plane of the opening of the vent at the centroid.		accordance with EPA Method 21, 40 CFR Part 60. • Sampling of seal shall be performed one (1) centimeter from the outer end of the shaft seal interface or at a distance of one (1) centimeter of any other point on the seal which could leak. • Sampling of atmospheric vents on compressor seal fluid systems shall be measured in the plane of the opening of the vent at the centroid.

Step 2. Select most stringent requirements:

The proposed requirements for work practice standards, and test methods are as follows:

Work Practice Standards:

Operator shall not use any compressors in light liquid service unless such compressor does not leak.

Each compressor shall be equipped with a seal system that includes a barrier fluid system and that prevents leakage of VOC to the atmosphere.

Each compressor seal system shall be; operated with the barrier fluid at a pressure that is greater than the compressor stuffing box pressure; or equipped with a barrier fluid system that is connected by a closed vent system to a control device that complies with the requirements of 40 CFR 60.482-10; or equipped with a system that purges the barrier fluid into a process stream with zero VOC emissions to the atmosphere.

The compressor seal barrier fluid system shall be in heavy liquid service or shall not be in VOC service. Each compressor seal barrier fluid system shall be equipped with a sensor that will detect failure of the seal system, barrier fluid system, or both. Each sensor shall be checked daily or shall be equipped with an audible alarm. If the sensor indicates failure of the seal system, the barrier system, or both, a leak is detected.

When a leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected.

If the leaking compressor is essential and cannot be repaired within 15 days after detection, the following actions shall be taken: replace the leaking compressor and inspect for leaks within three days after detection, vent emissions to a vapor recovery device that is at least 95 percent efficient as measured by EPA Method 25, or to a flare that satisfies the requirements of 40 CFR 60.18, or repair the essential device to eliminate the leak during the next process unit shutdown,

but in no case later than one (1) year from the date of the original leak detection.

A weatherproof and readily visible identification, marked with the equipment identification number, shall be attached to the leaking equipment. The identification may be removed after it has been repaired. Devices to repaired at the next shutdown shall be tagged, marked or coded in a manner easily identifiable by District personnel.

Test Methods:

Sampling measurements shall be performed with a portable hydrocarbon detection instrument in accordance with EPA Method 21, 40 CFR Part 60.

Sampling of seal shall be performed one (1) centimeter from the outer end of the shaft seal interface or at a distance of one (1) centimeter of any other point on the seal which could leak.

Sampling of atmospheric vents on compressor seal fluid systems shall be measured in the plane of the opening of the vent at the centroid.

The proposed requirements are at least as stringent as those imposed by District Rule 4452 and 40 CFR 60.482-3 as demonstrated below:

Compliance with the work practice standards and test methods of District Rule 4452:

This rule requires the following work practice standards and test methods:

Work Practice Standards

Operator shall not use any compressors in light liquid service unless such compressor does not leak.

Compressors shall not leak in excess of 10,000 ppm above background when measured at a distance of one (1) centimeter from the potential source with an instrument

calibrated with methane and/or drip liquid VOCs at a rate of more than three (3) drops per minute.

Compressors shall be inspected for leaks at least once every three (3) months.

Leaking compressors shall be repaired within 15 calendar days. If the leaking compressor is essential and cannot be repaired within 15 days after detection, the following actions shall be taken: replace the leaking compressor and inspect for leaks within three days after detection, vent emissions to a vapor recovery device that is at least 95 percent efficient as measured by EPA Method 25, or to a flare that satisfies the requirements of 40 CFR 60.18, or repair the essential device to eliminate the leak during the next process unit shutdown, but in no case later than one (1) year from the date of the original leak detection.

A readily visible identification, in the form of a weather-proof tag shall be attached to any device which leaks. Devices to repaired at the next shutdown shall be tagged, marked or coded in a manner easily identifiable by District personnel.

Test Methods

Sampling measurements shall be performed with a portable hydrocarbon detection instrument in accordance with Method 21, 40 CFR Part 60.

Sampling of seal shall be performed one (1) centimeter from the outer end of the shaft seal interface or at a distance of one (1) centimeter of any other point on the seal which could leak.

Sampling of atmospheric vents on compressor seal fluid systems shall be measured in the plane of the opening of the vent at the centroid.

The proposed requirements are at least as stringent as this rule.

Compliance with the work practice standards and test method of 40 CFR 60.482-3:

This rule requires the following work practice standards and test method:

Work Practice Standards

Each compressor shall be equipped with a seal system that includes a barrier fluid system and that prevents leakage of VOC to the atmosphere.

Each compressor seal system shall be; operated with the barrier fluid at a pressure that is greater than the compressor stuffing box pressure; or equipped with a barrier fluid system that is connected by a closed vent system to a control device that complies with the requirements of 40 CFR 60.482-10; or equipped with a system that purges the barrier fluid into a process stream with zero VOC emissions to the atmosphere.

The barrier fluid system shall be in heavy liquid service or shall not be in VOC service.

Each barrier fluid system shall be equipped with a sensor that will detect failure of the seal system, barrier fluid system, or both.

Each sensor shall be checked daily or shall be equipped with an audible alarm.

If the sensor indicates failure of the seal system, the barrier system, or both, a leak is detected.

When a leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected.

A first attempt at repair shall be made no later than 15 calendar days after each leak is detected.

Delay of repair of equipment for which leaks have been detected will be allowed if the repair is technically infeasible without a process unit shutdown. Repair shall occur before the end of the next process unit shutdown.

Delay of repair of equipment will be allowed for equipment which is isolated from the process and which does not remain in VOC service.

A weatherproof and readily visible identification, marked with the equipment identification number, shall be attached to the leaking equipment. The identification may be removed after it has been repaired.

Test Method

EPA Method 21 shall be used to determine the presence of leaking sources.

The proposed requirements include this requirement and are therefore at least as stringent as 40 CFR 60.482-3.

Step 3. Conditions ensuring compliance with applicable requirements.

Conditions 51 through 55, and 77 of the facility wide requirements assure compliance with the applicable requirements of this streamlining action.

Step 4. Certify Compliance

By complying with the conditions in the requirements for these permit units, the applicant is certifying compliance with all applicable requirements.

Step 5. Compliance schedule for new monitoring requirements

Not applicable.

Step 6. Permit Shield

By using this streamlining process the applicant is requesting permit shield from the requirements of District Rule 4452 and 40 CFR 60.482-3 and 40 CFR 60.485. See conditions 99 of the facility wide requirements.

Reporting Requirements for Refineries

Subpart GGG requires facilities to submit semiannual reports with the information specified in 40 CFR 60.487.

- Condition 98 of the requirements of the facility wide requirements, S-36-0-1, assure compliance with this rule.

12. District Rule 4453, Refinery Vacuum Producing Devices or Systems

District Rule 4453 has been submitted to the EPA to replace Kern County Rule 414.2 which is in the SIP. District Rule 4453 is as stringent as Kern County Rule 414.2, as shown on Table 3.

Table 4 - Comparison of District Rule 4453 and Kern County Rule 414.2

REQUIREMENT	4453 District	414.2 Kern
On and after July 1, 1980: 1. Hot wells and accumulators shall be covered. 2. The vapors from the vacuum producing device or system including hot wells and accumulators shall either be: a) Collected, compressed, and added to refinery gas. b) Controlled and combusted in an appropriate firebox or incinerator with at least 90 percent VOC control efficiency. c) Or controlled by a method that is equivalent to a) or b) and approved by the APCO.	✓	✓

The purpose of this rule is to limit VOC emissions from refinery vacuum producing devices or systems.

a. 79.2 MMBtu/hr Atmospheric/vacuum Crude Unit (S-36-1-4)

- Condition 19 of the requirements for this permit unit assures compliance with this rule.

13. District Rule 4454, Refinery Process Unit Turnaround

District Rule 4454 has been submitted to the EPA to replace Kern County Rule 414.3 which is in the SIP. District Rule 4454 is as stringent as Kern County Rule 414.3, as shown on Table 4.

Table 4 - Comparison of District Rule 4454 and Kern County Rule 414.3

REQUIREMENT	4454 District	414.3 Kern
A person shall not depressurize any vessel containing VOCs unless the process unit turnaround is accomplished by employing one of the following operating procedures: a. The organic vapors shall either be recovered, added to the refinery fuel gas system and combusted; or controlled and piped to an appropriate firebox or incinerated for	✓	✓

REQUIREMENT	4454 District	414.3 Kern
combustion; or flared, until the pressure within the process vessel is as close to atmospheric pressure as is possible. b. All process vessels shall be depressurized into the control facilities to less than 1020 mm Hg (5 psig) before venting/opening to atmosphere. c. All organic compounds which emerge from a refinery process vessel during the purging of said vessel and which otherwise would be emitted to the atmosphere shall be either directed to a flare or incinerator or shall be used for fuel until such disposition of emissions is not technically feasible or is less safe than atmospheric venting.		
Any process vessel that has been depressurized to less than 1020 mm Hg (5 psig).	✓	✓

The purpose of this rule is to limit VOC emissions resulting from the purging, repair, cleaning, or otherwise opening or releasing pressure from a refinery vessel during a process unit turnaround.

a. Facility Wide Requirements (S-36-0-1)

- Condition 94 of the requirements for this permit unit assures compliance with this rule.

14. District Rule 4623, <u>Storage of Organic Liquids</u>

The purpose of this rule is to limit VOC emissions from the storage of organic liquids. This rule applies to equipment used to store organic liquids, including crude oil and petroleum distillates, with a true vapor pressure of greater than 1.5 psia.

a. Petroleum Storage Tanks (S-36-8-1, -11-1, -15-1, -16-1, -18-1, -19-1, -20-1, -21-1, -22-1, -23-1, -24-1, -25-1, -27-1, -28-1, -29-1, -30-1, -31-1, -34-1, -35-1, -47-1, -48-1, -50-1, -58-1)

These storage tanks store organic liquid with a true vapor pressure less than 1.5 psia. Conditions are added to the requirements of these permit units to assure continued exemption to this rule.

- Conditions 1 through 3 of the requirements for this permit unit assure exemption to this rule.

b. Fixed Roof Naphtha Storage Tank (S-36-81-1)

- Conditions 2 through 7, 11, and 13 of the requirements for this permit unit assure compliance with this rule.

c. 4,200,000 Gallon Internal Floating Roof Oil Storage Tank (S-36-108-1)

- Conditions 1 through 8, 15, 23, 26, 40, and 41 of the requirements for this permit unit assure compliance with this rule.

15. District Rule 4624, Organic Liquid Loading

The purpose of this rule is to limit VOC emission from organic liquid loading by limiting the vapor pressure and storage temperature.

a. Naphtha Truck Loading Operation (S-36-82-1)

- Condition 1 of the requirements for this permit unit assures compliance with this rule.

b. Loading Racks (S-36-100-1, -102-1)

- Condition 1 of the requirements for these permit units assures compliance with this rule.

c. Railcar Loadout (S-36-103-1)

- Condition 1 of the requirements for this permit unit assures compliance with this rule.

16. District Rule 4625, Wastewater Separators

The purpose of this rule is to limit VOC emissions from wastewater separators by requiring a vapor loss control device.

a. 2,000 BBL Oil Water/Separator (S-36-6-3)

- Conditions 2, 3, and 5 assure compliance with this rule.

17. District Rule 4641, Cutback, Slow Cure, and Emulsified Asphalt, Paving and Maintenance Operations

The purpose of this rule is to limit VOC emissions by restricting the manufacture of certain type of asphalt for paving and maintenance operations.

a. Facility Wide Requirements (S-36-0-1)

- Conditions 95, 96, and 97 of the requirements for this permit unit assure compliance with this rule.

18. District Rule 4801, Sulfur Compounds

District Rule 4801 has been submitted to the EPA to replace Kern County Rule 407 which is in the SIP. District Rule 4801 is as stringent as Kern County Rule 407, as shown on Table 5.

Table 5 - Comparison of District Rule 4801 and Kern County Rule 407

REQUIREMENT	4801 District	407 Kern
a person shall not discharge into the atmosphere sulfur compounds exceeding in concentration at the point of discharge 0.2 percent by volume calculated as sulfur dioxide on a dry basis averaged over 15 consecutive minutes.	✓	✓
EPA Method 8 and ARB Method 1-100 shall be used to determine such emissions.	✓	

This rule limits the emission of sulfur compounds to 0.2% by volume (2000 ppmv) calculated as SO_2, on a dry basis averaged over 15 minutes. Operators have the option of complying with this emission limit by using certified fuels, by complying with fuel sulfur content limits, or by source testing the emission unit.

This facility is using non-certified fuels and complies with the emission limit by fuel sulfur content or by source testing the emission unit. The following calculations will determine the sulfur limit for units using natural gas and fuel oil.

Sulfur limit for non-certified gaseous fuels:

Assuming 0% excess air in the exhaust stream corresponds with maximum SO_X emissions concentration (neglecting NO_X and SO_X relative to SO_2 in the exhaust) and that CH_4 represents a typical gaseous fuel, the combustion equation for natural gas is:

$$CH_4 + 2O_2 + 7.56N_2 + YS \rightarrow CO_2 + 2\,H_2O + YSO_2 + 7.56N_2$$

where:

Y = moles of sulfur in the fuel.

Solving the expression for the fraction of SO_2 in the dry exhaust by volume gives:

$$\frac{Y}{1+7.56} = 0.002 \quad \Rightarrow \quad Y = 0.01712$$

where:

Y = mole fraction of S per mole of CH_4 combusted
1 = one mole of CO_2
7.56 = number of moles of N_2
0.002 = 0.2% by volume = 2000 ppmv limit per District Rule 4801

Use Y to calculate the weight fraction of S in one mole of CH_4:

$$\frac{(0.01712)(32.06)}{(16.04)+(0.01712)(32.06)} = 0.033 \quad \Rightarrow \quad 3.3\% \text{ S by weight in the fuel.}$$

where:

32.06 = molecular weight of sulfur (S)
16.04 = molecular weight of methane (CH_4)
0.033 = fraction of S by weight in the fuel

The limit determined above for gaseous fuels is 3.3 weight percent sulfur. This value is conservative for field gas which frequently has a lower heating value and higher exhaust volume flow rate than pure methane. Operators may choose to comply with this fuel sulfur limit by fuel testing using grab sample analysis by GC-FPD/TCD performed in the laboratory. Fuel sulfur content testing shall be performed weekly except that if compliance has been demonstrated for eight consecutive weeks, then the testing frequency shall be semi-annual. In all cases, operator shall record dates on which the unit is fired on non-certified fuel.

Sulfur limit for non-certified liquid fuels:

$$\frac{\left(\frac{157\,(\mathrm{S})\ lb\ SO_x}{10^3\ gal\ oil}\right)\left(\frac{23.7\ L\ SO_2}{gmol\ SO_2}\right)\left(\frac{0.035315\ dscf\ SO_2}{L\ SO_2}\right)\left(\frac{453.59\ g\ SO_2}{lb\ SO_2}\right)}{\left(\frac{9190\ dscf\ exhaust}{MMBtu}\right)\left(\frac{64.14\ g\ SO_2}{gmol\ SO_2}\right)\left(\frac{150\ MMBtu}{10^3\ gal\ oil}\right)} = \left(\frac{0.002\ dscf\ SO_2}{dscf\ exhaust}\right)$$

where:

$S \equiv$ weight % of sulfur in the oil

$\frac{157\,(S)\ lb\ SO_2}{10^3\ gal}$ = uncontrolled emission factor for SO_2 (AP-42, Table 1.3-2)

$23.7\frac{L}{gmol} = \frac{(288.71K)\left(22.4\frac{L}{gmol}\right)}{273.15K}$ = molar volume of an ideal gas corrected to District standard conditions (60°F, 14.7 psi) per Charles' Law

$0.035315\frac{ft^3}{L}$ = conversion factor (AP42, Appendix A)

$453.59\frac{g}{lb} =$ conversion factor (AP42, Appendix A)

$9190\frac{dscf}{MMBtu}$ = F-factor, F_d, for oil (40 CFR § 60, App. A, Meth. 19, Table 19-1)

$64.14\frac{g \cdot SO_2}{gmol}$ = molecular weight, SO_2

$\frac{150{,}000\ Btu}{1\ gal\ diesel}$ = heating value of residual oil (AP-42, Appendix A)

$0.002\frac{parts \cdot SO_2}{parts \cdot exhaust}$ = District Rule 4801 and Kern County Rule 407 emission limit

The preceding calculation shows that an exhaust concentration of 0.2% by volume corresponds to a fuel sulfur content by weight of 3.0%. Fuel sulfur content testing shall be performed weekly except that if compliance has been demonstrated for eight consecutive weeks, then the testing frequency shall be semi-annual. In all cases, operator shall record dates that the unit is fired on non-certified fuel.

Compliance with the above requirements is assured by the following conditions in the requirements for these permit units.

a. Atmospheric/Vacuum Crude Unit #4 (S-36-1-4)

- Conditions 8 through 12 of the requirements for this permit unit assure compliance with this rule.

b. Atmospheric Crude Unit #1 (S-36-2-3)

- Conditions 8 through 12 of the requirements for this permit unit assure compliance with this rule.

c. ABA Plant with Asphalt Blowing Still (S-36-4-6)

- Conditions 8 through 12 of the requirements for this permit unit assure compliance with this rule.

d. Lube Oil Finishing Plant (S-36-37-10)

- Conditions 7 through 10 of the requirements for this permit unit assure compliance with this rule.

e. 31.25 MMBtu/hr Boiler (S-36-41-6)

- Conditions 8 through 12 of the requirements for this permit unit assure compliance with this rule.

f. Crude Unit and/or Visbreaking Unit (S-36-42-3)

- Conditions 8 through 12 of the requirements for this permit unit assure compliance with this rule.

g. 103.4 MMBtu/hr Diesel Treating Unit (S-36-51-5)

- Conditions 71 through 76 of the requirements for this permit unit assure compliance with this rule.

h. 12.6 MMBtu/hr Oil/Gas Fired Standby Boiler (S-36-99-1)

- Conditions 7 through 11 of the requirements for this permit unit assure compliance with this rule.

19. 40 CFR Part 60, Subpart A section 60.18, <u>General Control Device Requirements</u>

Sections 60.18(c)(3), 60.18(c)(4)(i-iii), 60.18(c)(5) and 60.18(f)(3-6) set a limit on the net heating value of the flared gas to be no less than 200 Btu/scf for nonassisted flares and 300 Btu/scf for air-assisted or steam-assisted flares. The method to be used to calculate net heating value is specified.

Section (c)(4)(i-iii) requires the flare gas exit velocity to conform to the following limits:

		Exit Velocity (ft/sec)	
Flare Type	Flare Gas Min. Btu/scf	Min	Max
Air-assisted	300	----	55
Non-assisted	200	----	60
Steam-assisted	300	----	60
Air-assisted	1,000	----	115
Non-assisted	>1,000	60	400
Steam-assisted	>1,000	60	400

Sections 60.18(c)(2), 60.18(e), and 60.18(f)(2) require that flares be operated with a flame present at all times when emissions may be vented to them. The presence of the pilot flame shall be monitored using a thermocouple or any other equivalent device to detect the flame presence.

a. 103.4 MMBtu/hr Diesel Treating Unit (S-36-51-5)

- Conditions 84 through 92 of the requirements for this permit unit assure compliance with this rule.

20. 40 CFR Part 60, Subpart J, <u>Standards of Performance for Petroleum Refineries</u>

The provisions of this subpart are applicable to petroleum refineries that utilize fuel gas combustion devices which are equipment, such as process heaters, boilers and flares used to combust fuel gas.

Section 60.104(a)(1) requires that any fuel gas combustion device shall not burn any fuel gas hydrogen sulfide (H_2S) in excess of 0.10 gr/dscf (230 mg/dscm).

Section 60.105 requires the installation of a continuous monitoring systems to monitor SO_2 emissions into the atmosphere or the concentration of H_2S in the fuel gas being burned.

a. 103.4 MMBtu/hr Diesel Treating Unit (S-36-51-5)

- Conditions 55 through 58, and 64 through 66 of the requirements for this permit unit assure compliance with this rule.

21. 40 CFR Part 60, Subparts K, Ka, Kb, Standards of Performance for Storage Vessels for Petroleum Liquids

Subpart K addresses the standards of performance for storage vessels for petroleum liquids for which construction, reconstruction, or modification commenced after June 11, 1973 and prior to May 19, 1978.

Petroleum storage tanks S-36-8-1 and S-36-15-1 were constructed prior to June 11, 1973 and therefore not subject to this subpart.

The following storage vessels are subject to this subpart.

a. Petroleum Storage Tank (S-36-11-1, -16-1, -29-1, -30-1, and -31-1)

- Conditions 1, 2, 3, and 4 of the requirements for these permit units assure compliance with this rule.

Subpart Ka addresses the standards of performance for storage vessels for petroleum liquids for which construction, reconstruction, or modification commenced after May 18, 1978, and prior to July 23, 1984.

The following storage vessels are subject to this subpart but are exempt since the true vapor pressure is less than 1.5 psia.

a. Petroleum Storage Tanks (S-36-9-1, -10-1, -12-1, -13-1, -14-1, -17-1, -39-1, -40-1, -59-1, -60-1, -61-1, -62-1, -63-1, -64-1, -65-1, -66-1, -67-1, -68-1, -69-1, -70-1, -71-1, and -72-1)

- Conditions 1 through 4 assure compliance with this rule.

b. Fixed Roof Naphtha Storage Tank (S-36-81-1)

- Conditions 1, 10, and 13 of the requirements for this permit unit assure compliance with this rule.

Subpart Kb addresses the standards of performance for storage vessels for petroleum liquids for which construction, reconstruction, or modification commenced after July 23, 1984.

The following petroleum storage tanks are subject to the requirements of this subpart.

a. Petroleum Storage Tanks (S-36-26-1, -44-1, and -49-1)

- Conditions 1 through 10 of the requirements for this permit unit assure compliance with this rule.

b. Petroleum Storage Tank (S-36-38-2)

- Conditions 1 through 8 of the requirements for this permit unit assure compliance with this rule.

c. Petroleum Storage Tank (S-36-104-2)

- Conditions 5 through 9 of the requirements for this permit unit assure compliance with this rule.

d. 4,200,000 Gallon Internal Floating Roof Oil Storage Tank (S-36-108-1)

- Conditions 9 through 14, 19 through 22, 24, 25, 35 through 40, and 43 through 45 of the requirements for this permit unit assure compliance with this rule.

22. 40 CFR Part 60, Subpart QQQ, Standards of Performance for VOC Emissions from Petroleum Refinery Wastewater Systems

The provisions of this subpart are standards of performance for VOC emissions from individual drain systems, oil-water separators, and closed vent systems and control devices in petroleum refinery wastewater systems.

a. Facility Wide Requirements (S-36-0-1)

- Conditions 74, 75, 77, 78, 79 through 87 of the requirements for this permit unit assure compliance with this rule.

b. 2,000 BBL Tank #2001 Oil/Water Separator (S-36-6-3)

- Conditions 2, and 6 through 9 of the requirements for this permit unit assure compliance with this rule.

23. 40 CFR Part 60, Subpart UU, Standards of Performance for Asphalt Processing and Asphalt Roofing Manufacture

The provisions of this subpart addresses standards of performance for asphalt blowing stills at petroleum refineries.

Section 60.472(b) requires that no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any blowing still:

- Particulate matter in excess of 0.67 kilograms of particulate per megagram of asphalt charged to the still when a catalyst is added to the still.
- Particulate matter in excess of 0.60 kilograms of particulate per megagram of asphalt charged to the still during blowing without a catalyst.
- Exhaust gases with an opacity greater than 0 percent.

Section 60.473(b) requires that the owner or operator using an afterburner to meet the emission limits in 60.472(b) shall continuously monitor and record the temperature in the combustion zone of the afterburner.

Permit units S-36-4-6, S-36-5-3, and S-36-43-2 were constructed prior to the applicability date of November 18, 1980. Therefore, the requirements of this rule do not apply.

24. 40 CFR Part 68, Chemical Accident Prevention Provisions

The requirements of this provision mandate that subject facilities submit a Risk Management Plan to the proper authority.

a. Facility Wide Requirements (S-36-0-1)

- Condition 41 of the requirements for this permit unit assures compliance with this rule.

25. Petroleum Refinery MACT Standard

The maximum achievable control technology (MACT) standard for petroleum refineries stems from the Clean Air Act Amendments of 1990. Under the Act, emissions of 189 hazardous air pollutants

(HAPs), also known as air toxics, must be regulated. Refineries that are major HAP sources with a potential to emit ≥ 10 tons per year (tpy) of any of the 189 HAPs or potential to emit ≥ 25 tpy of total HAPs need to comply with the requirements of the MACT standard.

San Joaquin Refinery does not have the potential to emit either 10 tpy of any of the 189 HAPs or 25 tpy of total HAPs and therefore is not subject to the requirements of the Petroleum Refinery MACT Standard. San Joaquin Refinery submitted a list for each HAP emission and the total emissions for all HAPs combined, which is included in this evaluation as Attachment E.

X. PERMIT SHIELD

A permit shield legally protects a facility from enforcement of the shielded regulations when a source is in compliance with the terms and conditions of the Title V permit. Compliance with the terms and conditions of the Operating Permit is considered compliance with all applicable requirements upon which those conditions are based, including those that have been subsumed.

A. Requirements Addressed by Model General Permit Templates

By using the model general permit template SJV-UM-0-1, the applicant has requested that a permit shield be issued for requirements addressed in the template. The basis for each permit shield is discussed in the Permit Shield section of each template. This permit shield is included in condition 39 of the requirements for permit unit S-36-0-1.

B. Requirements not Addressed by Model General Permit Templates

The applicant is requesting a permit shield for each of the requirements listed below:

1. District Rule 4201 and 4301

a. Atmospheric/Vacuum Crude Unit #4 (S-36-1-4)

Compliance with this requirement was address in Section IX of this document and is assured by conditions 2, 4 through 12 and 22 through 25 of the requirements for permit unit S-36-1-4. Therefore, a permit shield is being granted in the requirements for permit unit S-36-1-4 as condition 45.

b. Atmospheric Crude Unit #1 (S-36-2-3)

Compliance with this requirement was address in Section IX of this document and is assured by conditions 2, 4 through 12, 15 and 16 of the requirements for permit unit S-36-2-3. Therefore, a permit shield is being granted in the requirements for permit unit S-36-2-3 as condition 40.

c. ABA Plant with Asphalt Blowing Still (S-36-4-6)

Compliance with this requirement was address in Section IX of this document and is assured by conditions 2, 4 through 12 and 26 of the requirements for permit unit S-36-4-6. Therefore, a permit shield is being granted in the requirements for permit unit S-36-4-6 as condition 42.

d. Lube Oil Finishing Plant (S-36-37-10)

Compliance with this requirement was address in Section IX of this document and is assured by conditions 2, 4 through 10, 26, 27 and 50 of the requirements for permit unit S-36-37-10. Therefore, a permit shield is being granted in the requirements for permit unit S-36-37-10 as condition 48.

e. 31.25 MMBtu/hr Boiler (S-36-41-6)

Compliance with this requirement was address in Section IX of this document and is assured by conditions 2 and 4 through 12 of the requirements for permit unit S-36-41-6. Therefore, a permit shield is being granted in the requirements for permit unit S-36-41-6 as condition 42.

f. Crude Unit and/or Visbreaking Unit (S-36-42-3)

Compliance with this requirement was address in Section IX of this document and is assured by conditions 2, and 4 through 12 of the requirements for permit unit S-36-42-3. Therefore, a permit shield is being granted in the requirements for permit unit S-36-42-3 as condition 46.

g. 103.4 MMBtu/hr Diesel Treating Unit (S-36-51-5)

Compliance with this requirement was address in Section IX of this document and is assured by conditions 35 through 38, and 68 through 76 of the requirements for permit unit S-36-51-5. Therefore, a permit shield is being granted in the requirements for permit unit S-36-51-5 as condition 93.

h. 12.6 MMBtu/hr Standby Boiler (S-36-99-1)

Compliance with this requirement was address in Section IX of this document and is assured by conditions 1, 3, 4, 5 through 11, 16 and 17 of the requirements for permit unit S-36-99-1. Therefore, a permit shield is being granted in the requirements for permit unit S-36-99-1 as condition 22.

2. District Rule 4641

a. Facility wide requirements (S-36-0-1)

Compliance with this requirement was address in Section IX of this document and is assured by conditions 95 through 97 of the requirements for permit unit S-36-0-1. Therefore, a permit shield is being granted in the requirements for permit unit S-36-0-1 as condition 100.

3. District Rule 4801

a. Atmospheric/Vacuum Crude Unit #4 (S-36-1-4)

Compliance with this requirement was address in Section IX of this document and is assured by conditions 8 through 12 of the requirements for permit unit S-36-1-4. Therefore, a permit shield is being granted in the requirements for permit unit S-36-1-4 as condition 46.

b. Atmospheric Crude Unit #1 (S-36-2-3)

Compliance with this requirement was address in Section IX of this document and is assured by conditions 8 through 12 of the requirements for permit unit S-36-2-3. Therefore, a permit shield is being granted in the requirements for permit unit S-36-2-3 as condition 41.

c. ABA Plant with Asphalt Blowing Still (S-36-4-6)

Compliance with this requirement was address in Section IX of this document and is assured by conditions 8 through 12 of the requirements for permit unit S-36-4-6. Therefore, a permit shield is being granted in the requirements for permit unit S-36-4-6 as condition 43.

d. Lube Oil Finishing Plant (S-36-37-10)

Compliance with this requirement was address in Section IX of this document and is assured by conditions 7 through 10 of the requirements for permit unit S-36-37-10. Therefore, a permit shield is being granted in the requirements for permit unit S-36-37-10 as condition 49.

e. 31.25 MMBtu/hr Boiler (S-36-41-6)

Compliance with this requirement was address in Section IX of this document and is assured by conditions 8 through 12 of the requirements for permit unit S-36-41-6. Therefore, a permit shield is being granted in the requirements for permit unit S-36-41-6 as condition 43.

f. Crude Unit and/or Visbreaking Unit (S-36-42-3)

Compliance with this requirement was address in Section IX of this document and is assured by conditions 8 through 12 of the requirements for permit unit S-36-42-3. Therefore, a permit shield is being granted in the requirements for permit unit S-36-42-3 as condition 47.

g. 103.4 MMBtu/hr Diesel Treating Unit (S-36-51-5)

Compliance with this requirement was address in Section IX of this document and is assured by conditions 70 through 76 of the requirements for permit unit S-36-51-5. Therefore, a permit shield is being granted in the requirements for permit unit S-36-51-5 as condition 94.

h. 12.6 MMBtu/hr Oil/Gas Fired Standby Boiler (S-36-99-1)

Compliance with this requirement was address in Section IX of this document and is assured by conditions 7 through 11 of the requirements for permit unit S-36-99-1. Therefore, a

permit shield is being granted in the requirements for permit unit S-36-99-1 as condition 23.

XI. PERMIT CONDITIONS

See draft permit conditions beginning on the following page.

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ATTACHMENT A
DETAILED FACILITY PRINTOUT

ATTACHMENT B
INSIGNIFICANT ACTIVITIES OR EQUIPMENT

The following exempt equipment was identified by the applicant on TVFORM-003, Insignificant Activities.

Exemption Category	Rule 2020 Citation	
Structure or incinerator associated with a structure designed as a dwelling for 4 families or less.	4.2.3	
Use of less than 2 gal/day of graphic arts materials.	5.4	✓
Natural gas or LPG-fired boilers or other indirect heat transfer units of 5 MMBtu/hr or less.	5.1.1	✓
Piston-type internal combustion engine with maximum continuous rating of 50 braking horsepower (bhp) or less.	5.1.2	✓
Gas turbine engines with maximum heat input rating of 3 MMBtu/hr or less.	5.1.3	
Space heating equipment other than boilers.	5.1.4	✓
Locomotives, airplanes, and watercraft used to transport passengers or freight.	5.2	
Cooling towers with a circulation rate less than 10,000 gal/min.	5.3	✓
Equipment at retail establishments used to prepare food for human consumption.	5.5.1	
Ovens at bakeries with total daily production less than 1,000 pounds and exempt by Section 5.1.1.	5.5.2	
Equipment used exclusively for extruding or compression molding of rubber or plastics, where no plasticizer or blowing agent is used.	5.6	
Containers used to store clean produced water.	5.7.1	
Containers ≤100 bbl used to store oil with specific gravity ≥ 0.8762.	5.7.2	✓
Containers ≤ 100 bbl installed prior to 6/1/89 used to store oil with specific gravity ≥ 0.8762.	5.7.3	✓
Brazing, soldering, or welding equipment.	5.10.1	✓
Fugitive emissions sources associated with exempt equipment.	5.10.3	✓
Equipment used to compress natural gas.	5.10.2	✓
Containers with a capacity ≤ 250 gallons used to store organic material where the actual storage temperature < 50 F.	5.7.4	✓
Containers used to store unheated organic material with an initial boiling point ≥ 302 F.	5.7.5	✓
Containers used to store fuel oils or non-air-blown asphalt with specific gravity ≥ .9042.	5.7.6	✓
Containers used to store petroleum distillates used as motor fuel with specific gravity ≥ 0.8251.	5.7.7	✓
Containers used to store refined lubricating oils.	5.7.8	✓

Exemption Category	***Rule 2020 Citation***	
Unvented pressure vessels used exclusively to store liquefied gases or associated with exempt equipment.	5.7.9 or 5.10.4	✓
Portable tanks used exclusively to store produced fluids for ≤ six months.	5.7.10	
Mobile transport tanks on vehicles for delivery of VOCs.	5.7.11	✓
Loading racks used for the transfer of less than 4,000 gal/day of unheated organic material with initial boiling point ≥ 302 F or of fuel oil with specific gravity ≥ 0.8251.	5.8.1.1	✓
Loading racks used for the transfer of asphalt, crude or residual oil stored in exempt tanks, or crude oil with specific gravity ≥ 0.8762.	5.8.1.2	✓
Equipment used to apply architectural coatings.	5.9.1	✓
Equipment used exclusively for the transfer of refined lubricating oil.	5.8.2	
Unheated, non-conveyorized degreasers < 10 ft^2 open area; using solvents with initial boiling point ≥ 248 F; and < 25 gal/yr evaporative losses.	5.9.2	✓
Pits and Ponds as defined in Rule 1020.	5.10.6	✓
Non-structural repairs & maintenance to permitted equipment.	4.2.6	✓
Emissions less than 2 lb/day from units not included above.	4.2.1	✓

ATTACHMENT C
O_2/CO_2 EXHAUST CONCENTRATIONS

NATURAL GAS

Maximum PM emissions will occur at 0% O_2 in the exhaust stream and District Rule 4301 requires a 12% CO2 correction. For natural gas firing units, 0% O_2 occurs at 12% CO_2. This is demonstrated by the following combustion equation for natural gas (wherein X denotes moles of excess air and (neglecting sulfur).

$$CH_4 + (2+X)O_2 + (2+X)(3.78)N_2 \rightarrow CO_2 + 2\,H_2O + XO_2 + (2+X)(3.78)N_2$$

Solving an expression for the fraction of O_2 in the exhaust by volume, wherein the numerator represents the number of moles of CO_2 and the denominator represents the total number of moles of dry exhaust, set equal to 12% CO_2 yields the number of moles of excess air (X).

$$\frac{1}{1 + X + (2+X)3.78} = 0.12 \quad \Rightarrow \quad X = 0.05$$

Substituting the coefficients and solving the resultant equation for the fraction of O_2 verifies that 12% CO_2 is equivalent 0% O_2:

$$CH_4 + 2.05O_2 + 7.75N_2 \rightarrow CO_2 + 2\,H_2O + 0.05O_2 + 7.75N_2$$

$$\frac{0.05}{1 + 0.05 + 7.75} = 0.0057 \approx 0\%$$

FUEL OIL

For units burning fuel oil the following combustion equation, wherein X denotes moles of excess air, reveals that 12% CO_2 in the exhaust stream occurs at 4% O_2. Consequently, the compliance of units firing on fuel oil is shown using AP42 F factors uncorrected from 0% O_2 to illustrate the worst case scenario.

$$C_{14}H_{30} + (21.5+X)O_2 + (21.5+X)(3.78)N_2 \rightarrow 14CO_2 + 15\,H_2O + XO_2 + (21.5+X)(3.78)N_2$$

Solving an expression for the fraction of O_2 in the exhaust by volume, wherein the numerator represents the number of moles of CO_2 and the denominator represents the total number of moles of dry exhaust, set equal to 12% CO_2 yields the number of moles of excess air (X).

$$\frac{14}{14 + X + (21.5+X)3.78} = 0.12 \quad \Rightarrow \quad X = 4.5$$

Substituting the coefficients and solving the resultant equation for the fraction of O_2 in the exhaust verifies that 12% CO_2 is equivalent 4% O_2:

$$C_{14}H_{30} + 25O_2 + 94.5N_2 \rightarrow 14CO_2 + 15H_2O + 4.5O_2 + 94.5N_2$$

$$\frac{4.5}{14 + 4.5 + 94.5} = 0.039 \approx 4\%$$

ATTACHMENT D
SULFUR/SULFUR DIOXIDE CONVERSION

The following analysis shows the reasoning behind the mass increase in converting sulfur to sulfur dioxide (SO_2). The chemical equation for converting sulfur into sulfur dioxide is:

$$S + O_2 \rightarrow SO_2$$

The preceding equation shows that 1 mole of sulfur combined with 1 mole of oxygen will create 1 mole of sulfur dioxide. The molecular weight of sulfur (S) is 32.06 grams/mole. The molecular weight of oxygen (O_2) is 32.0 grams/mole. Thus, when the mole of sulfur is combined with the mole of oxygen, the resulting mole of sulfur dioxide has a mass of 64.06 grams/mole.

The preceding analysis shows that when sulfur is calculated as sulfur dioxide, the resulting mass of sulfur dioxide is twice the mass of initial sulfur converted.

ATTACHMENT E

Facility Hazardous Air Pollutant List

ATTACHMENT F - CURRENT PTOs

ATTACHMENT G

Public Comments/District Response

Public Comments/District Response

1. EPA

Public comments regarding the District's analysis and preliminary decision were submitted by EPA. A copy of the January 15, 2002 EPA letter containing these comments are available at the District.

EPA COMMENT

Leak Detection and Repair:

EPA's New Source Performance Standard Subpart GGG and the SIP-approved District regulations (464.1 and 464.2, currently numbered 4451 and 4452) require the use of EPA-method 21 hydrocarbon monitoring for many types of components, while allowing a non-instrumental screening for others (using sounds, sight, and smell). We recommend specifically including the Method 21 hydrocarbon detection monitoring required by EPA and/or District regulations. For example, we recommend listing in condition #59 and condition #64 that the monitoring must be conducted using EPA method 21.

Rule 4451 (section 5.2) states "inspection shall be accomplished by sampling for vapors with a portable hydrocarbon detection instrument and by visual examination for indication of liquid leakage." This rule applies to valves, flanges, threaded connections, and process drains. Therefore, we recommend adding the requirement to use Method 21 when listing the inspection requirements for these units, even in those cases where the EPA NSPS would allow an initial screening before requiring the use of Method 21. (conditions 46, 70, 71, and 75)

As we have discussed previously, EPA Method 21 requires measurements at the interface, rather than 1 cm away from the interface. Therefore, leak requirements under the NSPS are subject to the EPA requirement, while components subject only to District Rule 4451 would follow the District's definition.

As we have discussed with District staff, we recommend requiring that the company maintain a log (which is typically electronic) of which components are subject to which I&M requirements. This log would facilitate implementation of an I&M program, (as the requirements may vary based on the type of liquid processed), and allow District or EPA inspector to determine compliance with I&M requirements.

DISTRICT RESPONSE

Conditions have been revised to specifically state that liquid component leak inspections and monitoring will be conducted in accordance with EPA Method 21. Conditions have been changed to require measurements at the interface except for compressor rotating

shafts, which must be measured within 1 cm of the shaft seal interface in accordance with EPA Method 21 and District Rule 4452.

A condition has been added to the facility-wide requirements that requires records be maintained on the type of liquids used in each process.

EPA COMMENT

Naptha Storage and Loading:

The Refinery loads naptha with an allowable vapor pressure of up to 2.7 psia from the naptha storage tank (unit #81) through the loading rack (unit #82). Loading rack Rule 4624 is not listed in the permit based on the 1.5 psia cut-off for organic liquids regulated by that rule. However, that loading rack is used to process organic liquids from the tank with allowable vapor pressures of up to 2.7 psia. Therefore, we recommend requiring compliance with Rule 4624 through the installation of controls, unless the facility can demonstrate that they load less than 4,000 gallons each day (from section 4.0 of Rule 4624) and accept enforceable permit limits.

Our understanding is that the “petroleum storage tanks” are used for storing crude oil and are restricted from storing naptha or other refined petroleum products that could trigger storage tank control requirements. We recommend clarifying that restriction on the permit. We also recommend defining “source or type” of oil based on a specific oil field with consistent characteristics. The District typically includes this for tanks at oil producing fields since a change triggers a requirement to monitor the vapor pressure. An alternative is to require routine sampling (such as monthly sampling for the 3.2 million gallon, 2.2 million gallon, and the 800,000 gallon tanks).

DISTRICT RESPONSE

Permit unit S-36-82 handles heavy naptha, which has a TVP at actual loading temperature of less than 1.5 psia and is exempted pursuant to District Rule 4624, Section 4.3. Petroleum storage tank permit condition specifically limits the true vapor pressure (TVP) of the petroleum liquid to less than 1.5 psia and is sampled annually and whenever there is a change in the source or type of receiving fluid.

A condition has been added to the facility-wide requirements requiring records of the source of the crude oil be maintained.

EPA COMMENT

Refinery MACT standard:

District staff have explained to our staff that the District received emission data that it used when evaluating the applicability of the refinery MACT standard for this source. We recommend describing the data used to determine MACT applicability determinations in the final evaluation for this facility, and for future refineries that may have larger emissions.

DISTRICT RESPONSE

The emissions data has been included in the evaluation as Attachment E.

2. SAN JOAQUIN REFINERY COMMENTS

Public comments regarding the District's analysis and preliminary decision were submitted by Texaco. A copy of the d12/27/2001 San Joaquin Refinery letter containing these comments is available at the District.

PUBLIC COMMENT

Permit S-36-0-1, condition 95. This condition states that the “operator shall not manufacture for sale nor use within the District...” San Joaquin Refining (SJR) produces materials for sale outside the administrative boundaries of the SJVUAPCD. SJR requests verification that this condition, as written, would not preclude SJR from selling products outside the district that are prohibited for sale within the District.

DISTRICT RESPONSE

The requirement does not preclude the facility from producing or selling products for use outside the District.

PUBLIC COMMENT

Permit S-36-2-3, condition 14. SJR requests verification that this condition specifies that there are no NOx limitations when firing on liquid fuel during natural gas curtailment. It is our understanding that firing on liquid fuel during normal operation is limited to the fuel use specified in condition 18 and to the emission limits specified in condition 16. It is SJR’s understanding that the emission limits specified in condition 16 do not apply during natural gas curtailment.

DISTRICT RESPONSE

Condition 14 has been deleted. NOx limits specified in condition 16 apply during natural gas curtailment.

PUBLIC COMMENT

Permit S-36-5-3, condition 5. The asphalt blowing still exhaust is routed to the John Zink thermal oxidizer shared with S-36-4. Therefore, visible emissions in the blowing still exhaust cannot be observed.

DISTRICT RESPONSE

Removed condition 5 from the permit.

PUBLIC COMMENT

Permit S-36-8-1, condition 2. This condition requires testing of the tank contents using the method specified in section 6.2, Rule 4623. Note that this tank is not subject to NSPS, therefore testing in conformance with 40 CFR 60.113 should not be required.

DISTRICT RESPONSE

Removed reference to 40 CFR 60.113 from condition 2.

PUBLIC COMMENT

Permit S-36-37-10, condition 5 and 6. SJR may purchase natural gas from various suppliers. What criteria are used to determine if the gas is PUC or FERC regulated, and what documentation is required?

DISTRICT RESPONSE

Copies of all fuel invoices, gas purchase contracts, and supplier certifications that shows compliance with the sulfur requirements of PUC General Order 58-B, Heating Value Measurement Standard for Gaseous Fuels, or FERC , Article 14 - Quality of Gas, will be the basis for determining compliance with the condition of firing on PUC or FERC regulated natural gas. Source testing the sulfur content of each fuel can also be used to show compliance with the sulfur content limitation requirement of conditions 5 and 6.